

Music
Lib.
MT
6
M43h
1888
v. 2

HOW TO
UNDERSTAND
MUSIC.

MATTHEWS.

lifornia
ional
lity



THE LIBRARY
OF
THE UNIVERSITY
OF CALIFORNIA
LOS ANGELES

50
210627
50
Palos

152

Algray B

X □ □ A

Digitized by the Internet Archive
in 2007 with funding from
Microsoft Corporation

NEW

G. Gray Jr.

MUSICAL MISCELLANIES:

HISTORICAL, CRITICAL, PHILOSOPHICAL
AND PEDAGOGIC.

BY

W. S. B. MATHEWS.

HOW TO UNDERSTAND MUSIC.

VOL. II.

PHILADELPHIA:
THEODORE PRESSER,
1712 CHESTNUT STREET.
1904.

COPYRIGHT, 1888.

W. S. B. MATHEWS,
CHICAGO.

Music
Library

MT

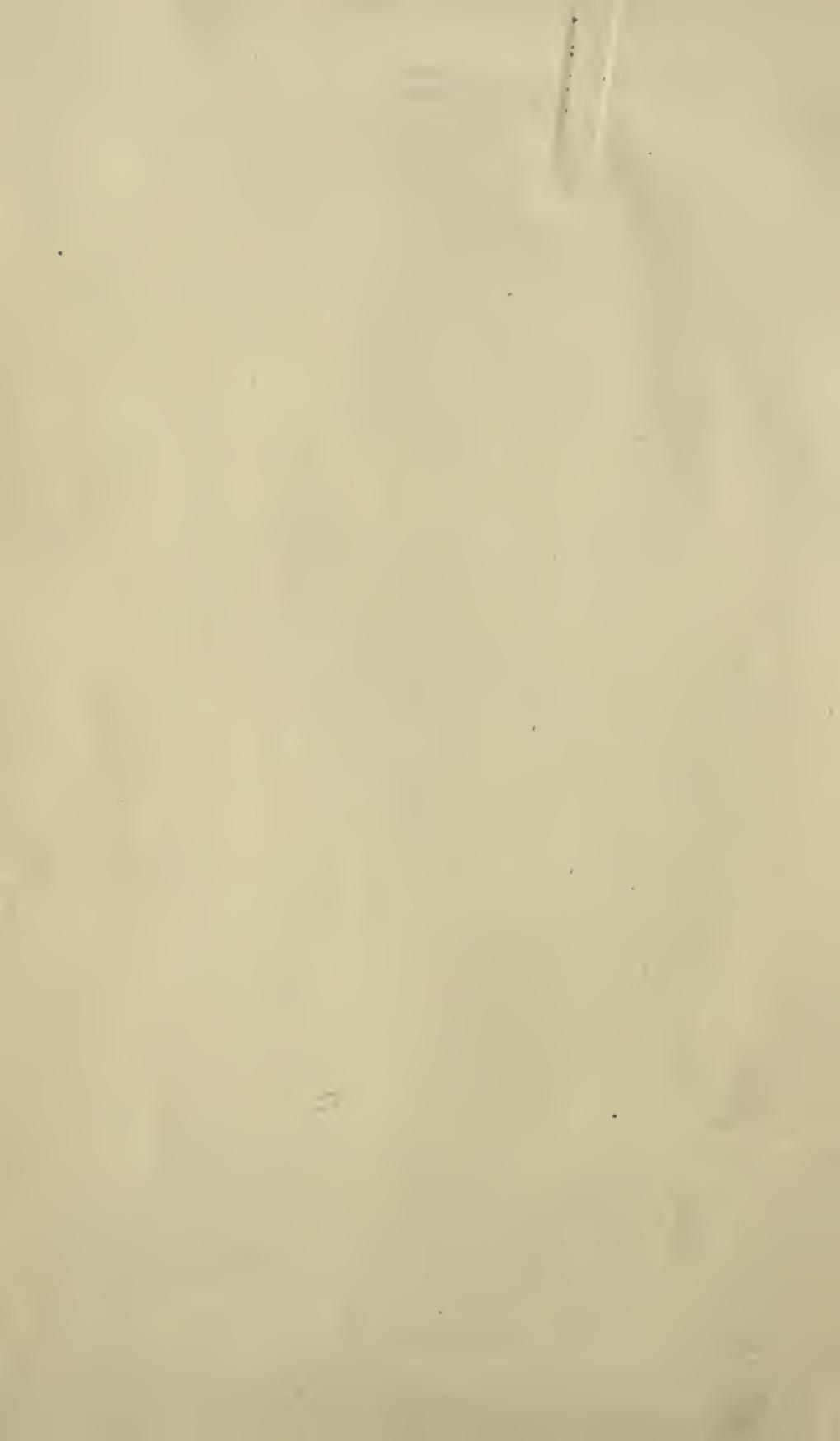
6

M43 h

1888

v. 2

626813



PREFATORY NOTE.

THE present volume is a sort of accident, having grown out of the plan of modifying the first volume of "How to Understand Music," by replacing the last two essays and the Dictionary with new matter. Upon collecting the material it was found to greatly exceed such limits; so in place of adding it to the old volume it was decided to make a new one. The essays here collected represent the more important phases of the author's musical studies since the production of the first volume. Several of them were not originally intended for book form, and partake, perhaps too much, of the levity and sketchiness of newspaper writing. Others are essentially "studies," incident to the more important duties of a musical critic and teacher, or preparatory to a serious narrative of the entire course of musical history, the preparation of which is already well advanced, as a third volume of this series. The attentive reader will observe that the essays on Schubert and Berlioz belong to the same category as the biographical essays of the first volume, scarcely exceeding the limits of newspaper sketches. The chapters on Richard Wagner are, in part, from the essays published in the non-official program book of the Chicago Festival of 1884; in part, from the author's letters from Europe to the *Chicago Daily News*, in the same year, and in part, new. An important section upon "Die Meistersinger" and "Tristan and Isolde" was written expressly for this work by the well-known Wagnerian scholar and American composer, Mr. Fred. Grant Gleason, acknowledgment of which is here and elsewhere made. The essay upon the Tonal System will be found to contain the most complete historical summary of the subject accessible within similar limits. It is believed to present the existing state of knowledge and theory upon the subject of just intonation and temperament, with a series of tables affording at a glance an idea of the crudities concealed in our tempered keyboards and scales, which there is too much disposition in certain quarters to acquiesce in as final. The essays upon the Psychology of Music, the Tonic Sol-Fa, Piano Teaching, and Self-Culture in Music, are mutually complementary, and, taken together, form a foundation for Pedagogic, or the Philosophy of Teaching. The limits of the volume having been reached sooner than was expected, the elaborate essay upon Musical History, originally intended for this place, had to be cut down to about a fifth of its proposed compass. It is hoped that this circumstance will be taken into account in estimating its literary demerits.

The third volume of "How to Understand Music" has been in preparation for more than two years, and it is hoped will be ready some time in 1889. It is intended to present in one volume an account of the whole course of musical history, four leading questions being asked concerning each of the great Culture-Periods of human history in turn,

PREFATORY NOTE.

namely: What kinds of instruments did they have? What kind of music did they make? What did they think about music? and What part of our present art of music did they have? These questions applied to the periods of Ancient Egypt, India, Greece, Rome, the Middle Ages, and Modern Times, successively, lead to a comprehensive understanding of the entire course of the development of this art. The work will be, therefore, a History of *Music*, rather than a collection of musical biographies. It is hoped in this way to cover the ground of the entire nine volumes octavo proposed by Fétis, the six or eight of Ambros, and the voluminous treatises of many other writers. The design may appear large, but the author is not without hopes of being able to finish it to the approval of teachers and students generally. Meanwhile he hopes that super-sensitive readers will not allow the literary defects of the present volume to outweigh their appreciation of the value of the information here brought together from a wide range of sources.

CHICAGO, MAY 26TH, 1888.

TO THE MEMORY OF
THE LATE
LOWELL MASON, DOCTOR OF MUSIC,
THE REPRESENTATIVE AMERICAN MUSICAL EDUCATOR;
AND TO HIS SON,
WILLIAM MASON, DOCTOR OF MUSIC,
THE AMERICAN ARTIST, TEACHER AND VIRTUOSO,
THIS VOLUME,
IN TOKEN OF PERSONAL INSPIRATION AND ASSISTANCE,
Is Respectfully Dedicated
BY
THE AUTHOR.

CONTENTS.

	CHAPTER FIRST.	PAGE
FRANZ SCHUBERT.		
Biographical Sketch—Analysis of Some of his Principal Works	3	
CHAPTER SECOND.		
HECTOR BERLIOZ.		
Sketch of his Life—Analysis of his Requiem, Te Deum, and Damnation of Faust	10	
CHAPTER THIRD.		
RICHARD WAGNER.		
Biographical Memoranda—Wagner's Ideal—Wagner's Style	19	
CHAPTER FOURTH.		
WAGNER (CONTINUED).		
His Early Period, including "Rienzi," "The Flying Dutchman," "Tannhaeuser," "Lohengrin," "Tristan and Isolde," "Die Meistersinger [analyzed by Fred. Grant Gleason, Esq.]	34	
CHAPTER FIFTH.		
WAGNER (CONCLUDED).		
Story of the "Nieblung's Ring"—Leading Motives of—Account of these Four Operas as Performed at Munich in 1884—"Parsifal" at Bayreuth, in 1884,	47	
CHAPTER SIXTH.		
PSYCHOLOGICAL RELATIONS OF MUSIC.		
The Psychology of Hearing Music, Thinking Music, Composing and Performing Music	88	
CHAPTER SEVENTH.		
THEORY OF PIANO TEACHING.		
Essential Nature of the Problem—Sketch of the Rise of Piano Playing—Practical Courses, by Eminent Pianists and Teachers	107	
CHAPTER EIGHTH.		
THE TONAL SYSTEM AND TEMPERAMENT.		
Historical Sketch of Tonal System and Theory Concerning It—Influence of Musical Instruments upon Sense-Perception—Elements of Identity in Related Tones—Diatonic Contents of a Key—Chromatic Contents—Temperament—Temperament and Perfect Intonation Compared—Rules for Computing Intonation—Tables	125	

CONTENTS.

	PAGE
CHAPTER NINTH.	
THE TONIC SOL-FA AS AN EDUCATIONAL FACTOR.	
Meaning of the Name—Rise of the System—The Notation Described—Mental Advantages resulting from its Use in Early Stages of Instruction—Limitations—Organization	158
CHAPTER TENTH.	
SELF-CULTURE IN MUSIC.	
Necessity of Self-culture—Culture Defined—Relation of the Environment—Methods of—Habit of Thinking Music—Range of Material—Outside Helps—Limitations of Self-Culture	172
CHAPTER ELEVENTH.	
THE GREEK DRAMA AND MODERN OPERA.	
Steps Leading to the Greek Drama—Nature of Greek Drama—Its Poverty as a Musical Performance—Its Fruitfulness as an Idea in Modern Art	191
CHAPTER TWELFTH.	
BIRD'S-EYE VIEW OF MUSICAL HISTORY.	
General Nature of Music—Its Antiquity—Its Value as an Art—Preeminently Psychic—Two Great Periods in its History—Modern Music—Possibility of yet More Perfect Form of Music than yet Realized	200
INDEX	207

CHAPTER FIRST.

SCHUBERT.

Franz (Peter) Schubert, the son of a poor schoolmaster, was born at Vienna in 1797. His father began to teach him the violin when he was the merest child, and soon thereafter his older brother began to teach him the piano. At the age of eleven he had a superior soprano voice, which secured him place in a famous boy-choir, and free schooling and support in connection therewith. At the age of sixteen the loss of his voice returned him to his father's house. He struggled on in poverty and obscurity. For three years he assisted his father in the school; then he gave it up and eked out a meagre support by giving lessons, playing an organ, and the like. Thus he led an uneventful life until a year after Beethoven's death, when he too died, in 1828, at the age of thirty-one. This modest and unappreciated young man was already beginning to be known as a composer of popular songs, some of which had been sung by Vogl, the famous tenor of that day. He was also known as the author of a number of piano pieces, some quartets and an unsuccessful opera. Nevertheless, when Schubert died, the most wonderful melodist that the world has known went over to the majority. In his brief life he had composed more than 500 songs, among them many which, for beauty and graphic illustration of the text, will never be surpassed. He left a large volume of pianoforte sonatas whose difficulty and the refinement which they require of the player, have prevented their being fully appreciated, even to this time. Some of his most striking songs have been transcribed for the piano by Liszt and others, and are among the loveliest piano pieces which we have. He left ten symphonies, longer and more fully scored than those of Beethoven. In short, for spontaneity and beauty of ideas Schubert is the most fascinating and the most richly endowed composer who has ever lived. In silence and in obscurity he wrought on. He had not the inestimable advantage of hearing his works played and of amending his style according to the effect of it upon the public, hence, many of his pieces are too diffuse. He turns over an idea too many times. He lacks concentration and he is not abundant in strong contrasts. On the other hand, there are many movements by Schubert which, for con-

summate beauty, have never been surpassed by the work of any other composer whatever. His characteristic trait is lyric melody. Nobody else writes so easily, so simply, yet so freshly as he. After he died, Liszt and Schumann did much to make known the wonderful quality of this great genius. Schumann discovered the symphony in C, in a cupboard, covered with dust. He had it played at Leipsic and wrote about it in the most rapturous terms. Even its great length he called "heavenly." And so it must have seemed to him; for the Schubert trick of continuance was exactly the one which Schumann found most impossible. This endless going on and on, from one beauty to another, all of it so easy, so natural, so charming, as an angel flies through the boundless empyrean of the heavens—all this was a new revelation to Schumann, who was earnest, tossed about from one extreme to another, and full of a strange energy which he never quite succeeded in expressing in tones; still less did he succeed in subduing his teeming ideas to the measured cadence of symmetry and of formal beauty. All these riches he found in Schubert without stint.

As a song writer, Schubert unites almost all the excellencies possible to this form of composition. His melodies are extremely fresh, *naïve*, refined, spontaneous, easy for the voice, yet always suited to the spirit of the text, where the text has a poetic spirit. For, while one would hardly care to go so far as to accuse Schubert of having set to music texts totally deficient in musical suggestiveness, it cannot be denied that quite a number of his texts are unworthy the music which he has associated with them. In truth, Schubert's musical fantasy was incessant; whatever moved him, even in a slight degree, increased this activity of musical fantasy within him, and the added force was straightway translated into tones. Hence, it is not strange that we find among his manifold songs a variety of grades of merit. Some are simple, *naïve*, true people's songs. They sing as a brook runs, because it is its nature to. Of this kind is the lovely "Hedge Roses;" others combine the free movement of a people's song with a luxurious digression and a happy modulation into related keys, highly poetic. Of this kind may be mentioned "Whither," in the Songs of the Mill; "The Trout," etc. In others, again, there is a tender melancholy, truly exquisite in quality; of this kind we may mention "Greeting to Spring," "My Sweet Repose," and that noble melody, "By the Sea" ("Am Meer"). In the latter the text is peculiarly German in the tone of its sentiment, but the melody is cosmopolitan. In other examples, as in the "Shakespeare's Serenade," Schubert unites extreme simplicity and an apparent absence of effort, with a few digressions from the key, apparently spontaneous, which impart a charming freshness to the whole.

It is Schubert's especial glory, as a song writer, to have opened the doors of what has been called the "modern Romantic;" in other words, as already described, he undertook to represent by means of the music, and especially by the instrumental parts of his songs, ideas and sentiments which the text only hinted at, and which are, in their nature, outside the range of music, except as aided by a clue in the text. Of this kind the famous "Erl King," "Wanderer," "Gretchen at the Spinning Wheel," and "To be Sung on the Waters," are examples. They are among the greatest songs that have ever been written.

In the instrumental music of Schubert, curiously enough, the romantic element is less conspicuous; in fact, it exists mainly in his use of song forms more or less modified, and his avoidance of thematic work, as compared with the usage of his day. While no author had a better idea of harmony, or a finer instinct in its employment for touching the feelings, the general cast of his instrumental music is distinctly melodic. It is only in the great "Fantasie," and in a few other cases, that we find him giving rein to his fancy in the matter of novel transitions, suggestive but uncompleted bits of melody, etc., which undoubtedly meant to him much more than the average listener will find in them. Many of these instrumental pieces, nevertheless, are of rare beauty. Among those which would find place in a long list of these are the well-known "Fair Rosamond" air and variations, Opus 142, and the Impromptu in A flat, in the same opus. Also, the Menuetto in B minor, Opus 79. But the most enjoyable of the Schubert compositions are the transcriptions of his songs by Liszt. These do not indulge in the extravagances, runs, cadenzas, and the like, that we find in many of Liszt's compositions, but throughout are loyal to the composer, and afford a charming selection of piano pieces of no great difficulty (as piano playing now goes) and of a variety of expression. Of these the more popular are the Shakespeare's Serenade ("Hark, Hark, the Lark"), "My Sweet Repose," "The Wanderer," the Serenade and the Barcarolle. The latter, however, is of great difficulty, as also is the Liszt arrangement of the "Erl King." Concerning the latter, which is, perhaps, the one piece of all others showing Schubert's genius in its brightest light, it is related that the next morning after he had written it, Schubert looked it over and was so little pleased with it that he threw it into the waste basket. A little later, Vogl, the tenor, called upon him, and as Schubert was still occupied with something that he was anxious to finish, he begged Vogl to excuse him for a minute or two. Espying a piece of music, apparently complete, in the waste basket, Vogl fished it out. "What have we here?" saying which, he looked it through and took it to the piano, where he tried it over. He

was so delighted with it that he took it away with him, and soon after sang it in public with great success. So near was this famous masterpiece to being lost for good, and so far was the composer himself from realizing what a splendid creation he had produced.

Of the orchestral works, perhaps the most resplendent are two of the symphonies, the one in C and the "unfinished" symphony in B minor. This latter work was not the last of Schubert's writing, as would naturally be supposed from its having been left incomplete, but was written in 1822; whereas the symphony in C was written in 1828, and is, therefore, one of the last compositions of the master.

Inasmuch as the symphony in C represents, perhaps, the latest advance in the development of instrumental music proper, it may not be amiss to speak of its subjects and the manner of their treatment with some detail.

Unlike certain of the Beethoven symphonies, as the sixth, the "Heroic," etc., the symphony in C has no moral, no design of representing anything outside itself. It is music playing with and for itself. Whatever of science it may have, whatever of orchestral skill, it has solely and singly for the purpose of expressing and bringing out musical beauty. Of all musical works it requires the least effort to listen to. Its beautiful strains are as easy to enjoy as the sunlight.

The symphony in C opens with a romantic and somewhat pensive introduction, *Andante*, the melody being first given by horns in unison.

Horns.

The first movement, proper, is an *Allegro ma non troppo* in alla breve time. The subject is a strong figure for strings in unison, answered by the oboes, clarionets and bassoons in triplets.

f

Oboes. 3 3 3 3

Strings. 3 3 3 3

After this has been developed at considerable length a second subject is introduced, a lovely melody in E minor, played by oboes and bassoons in thirds and octaves.

\hat{p}

\hat{p}

The entire completion of this subject as well as the manner in which it is afterward treated, are thoroughly Schubertian. It is developed at great length, and with a multitude of charming changes before the repeat. It also serves as the text of a very extended elaboration, at the end of which the usual recapitulation takes place.

The second movement is *Andante con moto*, A minor, the principal subject being this:

Oboe.
p
Strings.

This melody is peculiarly characteristic of Schubert, as also is the choice of instruments for delivering it. As here treated it is perhaps repeated too many times, but it is one of the most bewitching movements that can be found in any instrumental work. After being many times turned over and considerably elaborated, a digression in A major comes in:

Flute.
Violins. pp

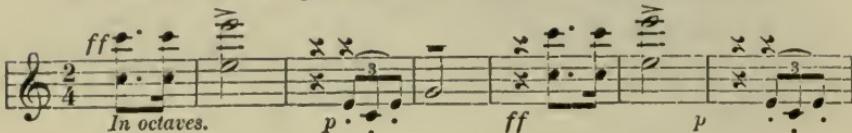
The third movement is the *Scherzo (Allegro vivace)*, in C, the theme being this:

Strings.
f
Oboe.
fz
p

The trio in A major opening thus:

Oboe.
f
Strings.
f

The finale is in C major, 2-4 time, *Allegro Vivace*, opening thus:



This rapid movement, almost like a tarantelle, soon leads to a long pedal point on the dominant, during which the oboes and bassoons have a pretty melody in thirds, which is counterpointed by the violins in triplets. Much is made of this, and then the subject comes back again more impassioned than ever. The second subject proper is in the key of G and opens with the famous four notes, four distinct pulsations, which have already been heard many times as subordinate motives, in previous parts of the symphony. They are given by the oboes, clarionets, bassoons and horns, the strings meanwhile playing a triplet accompaniment. They are relieved by an antithesis in quarters, a flowing melodic phrase, which leads to a repetition of the four note motive upon the tonic. Presently the flutes take the theme. Later the bassoons join in the answer. Presently the brass has the famous four notes. The elaboration is mainly composed of the pedal point motive, already referred to, and a vigorous and emphatic repetition of these four notes. This is the form in which they first appear.

A musical score for piano or orchestra. The key signature is C major (no sharps or flats). The time signature is 2/4. The top staff is labeled "Wood-wind." and shows eighth-note chords. The bottom staff is labeled "Strings." and shows eighth-note chords. The instruction "3" is written above the strings' staff.

This finale is developed at great length and with an almost endless variety of detail, but throughout the whole the motives given are the leading ones. A work of this length ought, indeed, to be heard several times in order to be appreciated as a whole, but this one of Schubert's is so full of pleasing melody that it can hardly fail of affording pleasure, even upon first hearing.

The most feasible way of making acquaintance with the chief beauties of this lovely work, for students not having access to orchestral performances of it, will be to procure a good pianoforte arrangement for four hands, and practice it in this form. The four-hand arrangements in the "Edition Peters" are of moderate difficulty. A copy can be had by sending to the publisher of this work fifty cents, with address. The advantages of four-hand arrangements for studying orchestral works, where they are not accessible in their original form, is that in the four-hand arrangements the voice parts are represented more fully than is possible for two hands; besides, it is a peculiarity of this style of playing that the time is kept much more satisfactorily than in solo playing. This is an incident of the union of two persons upon the same piece. In order to keep together they are obliged to keep time, and abstain from the endless and misleading rubatos from which solo performances are hardly ever free. These rubatos are much more detrimental in instrumental music for orchestra than in piano music. One of the elements of satisfaction in orchestral playing is the steady movement of the time. Even in the most liberal conducting, the time is kept much more steadily than in the common run of solo playing. While this is true of good players, it is much more true of common or indifferent ones, who, in addition to making whatever variations of the time their fancy may happen to suggest to them as likely to produce a pleasing effect, add many more involuntarily, in consequence of their unfamiliarity with technic, and their inability to play the difficult passages in the same movement as the easier ones. The practice of four-hand music is therefore to be recommended, not alone in the present instance, but in regard to all other difficult music, and particularly all other orchestral music. Where circumstances permit the employment of larger means, eight-hand arrangements for two pianos may be used to advantage. There are, also, arrangements of these and nearly all other works of the classical school for violin and piano, string quartette and piano, and for small orchestra of eight pieces. Many of these are available in small places, where, by their aid, an idea can be obtained of the attractive points of this class of music, and presently such efforts may lead to something more nearly approaching an orchestra. The music of Schubert is peculiarly available for study in places of this kind, because it is so melodious in character as to be appreciable by every hearer without effort, and without the consciousness of nerving himself up to a laborious grappling with the classical.

CHAPTER SECOND.

HECTOR BERLIOZ.

Hector Berlioz, one of the most original geniuses of modern music, was born at Grenoble, near Paris, France, December 11th, 1803. In personal history he was not fortunate. The son of a physician, he was intended to follow his father's profession. Accordingly, when he was of a proper age he was sent to Paris to study medicine. But music claimed him for her own. When he fully decided upon being a musician his father cast him off, and the young enthusiast was driven to the expedient of earning his living as a chorus singer at the opera. He got admission to the Conservatoire, where he showed much talent in some directions but great dullness in mastering the rules of composition as then taught. Cherubini said of him, that Berlioz disliked fugue because fugue did not like him. After being repeatedly "plucked" in examinations, his cantata, "Sardanapalus," gained for him "the grand prize of Rome," which carried with it a pension for his support at Rome during three years' study. This was in 1830. The Roman study was of great interest to him in all respects but in music, in which respect Rome was at a low state, for Berlioz had a singularly quick mind and his sympathies reached out in almost every direction of artistic and literary activity. Upon his return to Paris he was no more of a favorite than he had been before. His very patent innovations in scoring, his inability to construct a counterpoint satisfactory to the pedants, and the extravagance which he permitted himself in the pursuit of what seemed to him an adequate representation of some startling situation or other, continued to make his music a sealed book to his generation. His case was prejudged, and it was not until after his death, which took place on March 9th, 1869, at Paris, that his genius began to be appreciated as it deserved. Meanwhile, he led a miserable life, gaining a meagre livelihood by writing fulelettes and criticisms in *Le Journal des Debats*, and other periodicals. He made an unhappy marriage with an Irish actress, from whom he was afterward divorced. But he allowed himself no cessation in his activity as a musical composer.

He left a large number of extraordinary compositions which are full

of genius. Berlioz is characterized by Mr. Edward Dannreuther, in Grove's Dictionary, in the following terms:—

"Berlioz' startling originality as a musician rests upon a physical and mental organization very different from, and in some respects superior to, that of other eminent masters; a most ardent nervous temperament; a gorgeous imagination incessantly active, heated at times to the verge of insanity; an abnormally subtle and acute sense of hearing; the keenest intellect, of a dissecting, analyzing turn; the most violent will, manifesting itself in a spirit of enterprise and daring equaled only by its tenacity of purpose and indefatigable perseverance."

Berlioz was one of the first fruits of the modern romantic movement in music. The quickness of his mind and his remarkably accurate judgment of the effect producible by any possible combination of instruments was not compensated by an artistic judgment capable of drawing the line at the beautiful. Indeed, the beautiful as such was not what he sought, but rather the novel, the extraordinary, the impressive, the grotesque. A study of his works irresistibly leads to the conclusion that he deemed the limits of the symmetrical, the pleasing, and the sensuously beautiful, as well as those of the expression of even the most ecstatic emotions unmixed with evil, to have been fully explored. The peaceful disporting with purely beautiful motives upon purely musical grounds, such as we find so strongly exemplified in the Schubert Symphony in C, is almost wholly wanting in the work of Berlioz. When he undertook to employ his marvelous powers of orchestration in the orchestral arrangement of other men's ideas, as in Weber's "Invitation to the Dance," "Polacca," etc., we find that no writer can surpass him in the production of sensuously beautiful effects, which are raised into an unwonted eminence of art by the cleverness with which they are done.

He has also at times a truly Shakespearean delicacy of fancy, as we find, for instance, in the Minuet of the Will o' the Wisps and the Dance of the Sylphs in his "Damnation of Faust." But, in general, his researches seem to have led him into the regions of the grotesque, the extraordinary, the abnormal, and even the terrible, as we find in the "Ride to Hell," the "Tuba Mirum," and in many other parts of his works.

The panegyric of his technical attainments, or rather his originalities, by Mr. Dannreuther, in Grove's Dictionary, is little if at all overstated. He says:—

"The gigantic proportions, the grandiose style, the imposing weight of these long and broad harmonic and rhythmical progressions toward some end afar off, the exceptional means employed for exceptional ends

—in a word, the colossal aspect of certain movements, such as the *Judex Crederis* of his ‘Te Deum,’ or the *Lachrymose* and *Dies Iræ* of his ‘Requiem’—are without parallel in musical art. The originality and inexhaustible variety of the rhythms, and the surpassing richness of the instrumentation, are points willingly conceded even by his staunchest opponents. As far as technic of instrumentation is concerned, it may truly be asserted that he treats the orchestra with the same supreme daring and absolute mastery with which Paganini treated the violin or Liszt the pianoforte. No one before him had so clearly realized the individuality of each particular instrument, its resources and capabilities. In his works, the equation between a particular phrase and a particular instrument is invariably perfect; and over and above all this, his experiments in orchestral color, his combinations of single instruments with others so as to form groups, and, again, his combination of several separate groups of instruments with one another, are as novel and as beautiful as they are uniformly successful.”

The most important works of Berlioz were the following: “Mass for the Dead,” composed for the funeral obsequies of General Damremont, in 1837; his operas “*Benvenuto Cellini*,” produced at the Académie Royale de Musique, in Paris, September 3d, 1838 (afterward repeated unsuccessfully at London in 1853); his great dramatic legend of “The Damnation of Faust,” in 1846; the Trilogie of “The Childhood of Christ,” in 1854; a comic opera, “*Beatrice et Benedict*,” 1863, and a grand opera, “*Les Troyens*,” never completed; in 1856 he produced his colossal “*Te Deum*” for two choruses and a choir of children, orchestra, organ and military bands. To this list must be added his orchestral compositions, several of which are extremely beautiful. The chief are the Harold Symphony, the Romeo and Juliet Symphony, Carnival Romain Overture, etc.

Berlioz’ talent for the gigantic, the extraordinary and the impressive, found illustration in his first great work, the “Mass for the Dead,” composed, as already stated, in 1837, for the obsequies of a distinguished general. Upon many accounts this is an extraordinary work. Although composed for actual use in memorial services, we must not allow this circumstance to mislead us as to the essential nature of the problem which Berlioz proposed for himself. Although ostensibly of a sacred character, the sacredness of the work begins and ends with the incidental circumstance of its having been based upon the words of the most solemn office of the church. Its solemnity, however, was not the operative motive of its selection by the composer, but rather the fact that the great mediæval hymn, the *Dies Iræ*, strikes a wide range of chords in what might be

called the morbid regions of human sympathy, and therein affords extraordinary opportunities to a composer. The whole tone of the work is almost irreligious, not to say theatrical. But even if we grant what most critics assert—that it is not successful in reproducing the best and most religious elements of the venerable text—this is to say no more of it than must also be said of those great masterpieces of poetry and painting, Dante's "Inferno," and Michael Angelo's "Last Judgment." Berlioz inherited the somewhat materialistic view of the after-death condition which the Latin church has handed down from the dark ages. Even Mozart, with all his refinement, was not able to free himself from it. As for Michael Angelo, nothing could be more sensational and materialistically suggestive than the transactions in his picture of hell. So, too, his illustration of the Resurrection and the Last Judgment. The dead are leaving their graves in prosaic disorder and dishabille; the air of the whole is intensely practical. The knotted muscles betoken the violence of the haste with which the awakened sleepers rush toward their final account. This is the spirit of Berlioz in the "Dies Irae" and "Tuba Mirum" of the present work. The enormous mass of sound created by such extraordinary means is the musical expression of the resurrection trumpet and the lake of endless fire.

From what we know of Berlioz' psychological condition during the period to which this Mass belongs, it is evident that he did not intend to produce a religious work, but only a work of a novel type, in which he would use the morbid and supernatural associations appertaining to death and the last judgment as a cover or excuse for giving expression to the vast phantasmagoria of uncanny musical combinations which filled his teeming fancy. Perhaps a summary of the order and nature of the different movements in the Requiem will render this clearer:—

It is divided into ten musical numbers. Of these, Nos. II, III, IV, V and VI are parts of the hymn "Dies Irae," and as such have a certain relation to each other, and go, by sequence, to make up one whole.

I. "*Requiem aeternam dona eis*" ("Eternal rest, give them, O Lord") is written for three, and occasionally six voices, in G minor, 3-4 time, *Andante poco lento*. At the words "*Te decet hymnus*," a second subject is introduced, in B flat, which is afterward brought back again in the last movement of the work..

II. "*Dies iræ, dies illa.*" Here we enter upon the real work which Berlioz had in mind. He starts out in a quasi-fugal style, and for a few measures seems to be accomplishing very little. But at the words "*Solvet sæculum in favilla,*" he rises to something of a climax, and the orchestra introduces a startling chromatic sequence and crescendo, fol-

lowed by a subsidence to the next verse, "*Quantus tremor*," which introduces the original subject in C minor. These words are repeated many times, in order to afford him the space he desired for amplifying the instrumental illustration of them, and rise to a great climax at the words "*Quantus tremor est futurus.*" Hereupon follows one of the two greatest episodes of the work. It is that of the elaborate and extraordinary introduction to the bass solo "*Tuba mirum.*" It is scored for full chorus of strings, and an unprecedented array of wood-wind and brass. The wood-wind is to consist of twelve horns, eight bassoons, four clarionets, two oboes and four flutes. The brass is arranged in four small orchestras at the opposite corners of the stage. The first consists of four trumpets, four tenor trombones, and two bombardens or tubas; the second, four trumpets and four tenor trombones; the third, the same; the fourth, four trumpets, four tenor trombones and four ophicleides. This inordinate multiplication of "the last trumpet" is characteristic of Berlioz, who, if he had charge of the arrangements, would never consider a resurrection probable, or at any rate certain, until he had emptied the heavenly regions of every last trumpet and able-bodied player. The bewildering answers of these opposite bands of brass give place to a single bass voice in the solemn words, "Hear the awful trumpet sounding." The accompaniment to this is as remarkable as the other. It consists of sixteen kettledrums, so tuned as to give chords. The effect is that of a dull, tremulous rumbling in which the pitch can with difficulty be made out, and no outlines can be distinguished. At the pauses of the solo, the resonant brass breaks in with overwhelming effect. At the words "*Mors stupebit,*" the chorus comes in, and much is made of a pianissimo state of stupefaction, only for the sake of reaching a larger climax at the end of the movement. At the words "*Quidquid latet,*" the rhythm becomes more complicated, by which an extraordinary effect is made which can only be characterized as "cyclopean."

III. The verse "*Quid sum miser*" is almost entirely for first tenors. Its artistic design was that of affording a rest before the terrific volume of the next number.

IV. "*Rex tremenda.*" Here, again, Berlioz has unchained the dogs of war with astonishing effect. The elements, however, are the same as those already employed in the "*Dies Iræ,*" except that here the usual complement of brass is but little exceeded.

It is a strong movement, forcibly instrumented, and abounding in graphic effects. The chorus parts are at times for six voices, the multiplication, however, being used only for filling up loud chords. It was of this that the composer said, "*C'est d'un horrible grandeur.*"

V. "*Quærens me sedisti lassus.*" An unaccompanied piece for voices, in imitative style. It was of this that Mr. Niecks remarked, that "you think you hear a rehearsal by the singers of the vocal parts of a choral work without the instrumental accompaniment belonging to it."

VI. "*Lachrymosa.*" This movement is probably the most completely successful of any in the entire work, as it is, also, the most extended. It has been described as "demanding from the choral parts the *morbidezza* and *abbandono* of a perfect Italian vocalist." The accompaniment is thoroughly characteristic of the composer, inasmuch as the melodic motive which is continually reiterated in it is totally opposed to the character of the choral melody which it complements. The broad rhythm of this number is also peculiarly like Berlioz.

VII. "*Offertorium.*" The "*Domine Jesu Christi*" presents the curious peculiarity of keeping the voices upon two notes, A alternating with B flat, throughout the movement, which is by no means short. The device was no doubt intended to suggest the intoned prayers of the congregation during the offertory, the organ furnishing the musical background.

VIII. "*Hostias et preces.*" This is mostly for four voices, mainly unsupported. At the close of the first phrase there occurs one of those peculiar effects upon which Berlioz prided himself. The orchestra enters with nothing else than three flutes and a trombone. The flutes sound the chord of B flat minor in alto; the trombone F below the bass staff, four octaves below.

IX. "*Sanctus.*" A tenor solo, intercalated with choral responses. "*Hosanna,*" a fugue which fully justifies Cherubini's *bon mot* that the reason why Berlioz disliked fugue was because the fugue disliked him.

X. "*Agnus Dei.*" Male chorus, with effects of choral responses in the orchestra. The words "*Te decet hymnus*" are set to the same theme as in the first number, after which the work subsides to a close.

It is, indeed, singular that Berlioz should have made his entry upon the stage as a composer of choral works with such a successful display of daring. It is a curious foreshadowing of a conception which he says came to him later, when he was in London serving as juror of the first international exhibition, in the crystal palace of 1851. In his *Soirée d'Orchestre* he tells how it affected him when he heard and saw the children at a great festival in St. Paul's, and he begins to speculate upon the question whether something of the sort could not be accomplished at Paris. He admits that there is no church in Paris so large as St. Paul's, and that a set of terraced seats under the dome of the Pantheon would accommodate no more than two or three thousand musicians. He then proceeds:—

"Admitting that the inclined plane, starting from the central door of the Pantheon would seat only five thousand hearers, an assemblage of this size, however, is respectable enough, and appears to me capable of representing that part of the population of Paris which possesses the sentiment and intelligence of art. Suppose now that in this amphitheatre instead of six thousand five hundred ignorant children, we have a thousand five hundred *musical* children, five hundred ladies, musicians, armed with veritable voices, besides two thousand men sufficiently endowed by nature and education. Suppose also, that in place of giving to the public the central part of the hexagon under the cupola, we place there a small orchestra of three or four hundred instrumentalists, and that to this well-exercised mass of four thousand three hundred musicians be confided the execution of a beautiful work, written in a style suitable to the employment of means of this magnitude, on a subject where grandeur is united to nobility, where vibrates the expression of all high thoughts which can cause the heart of man to pulsate. I believe that such a manifestation of the most powerful of arts, aided by the prestige of poetry and orchestra architecture, would really be worthy of a nation like ours, and would leave very far behind it the vaunted festivals of antiquity."

It was in pursuance of this conception that he undertook, a year or two later, the production of his great "Te Deum." The forces for which Berlioz planned it are those given in the English reprint of the work, and are considerably below those indicated in the first conception, as given from Berlioz himself. They are these: A double chorus of two hundred voices, a third choir of children of six hundred voices, an orchestra of one hundred and thirty-four, an organ, and solo voices. He directs that the orchestra and two principal choruses be placed on a platform at one end of the church, and a short distance from them the third choir; the organ is to be at the other end of the church. The work was designed as part of a great epic-dramatic work in honor of Napoleon, the First Consul. At the moment of his return from the Italian campaigns, he was to enter Notre Dame, where this "Te Deum" was to be sung, and the standards of the victorious commander blessed by the ecclesiastical powers. The whole work was never completed, and the "Te Deum" had its first and only performance, in Berlioz' lifetime, in the church of St. Eustache, on the 30th of April, 1855, upon the occasion of the opening of the French Palais d' Industrie. Its next performance appears to have been at Bordeaux, twenty-eight years later, in 1883. The work is set in seven numbers: a triple chorus, "Te Deum Laudamus"; triple chorus, "Tibi Omnes Angeli"; double chorus, "Dignare Domine"; tenor solo and double chorus, "Te Ergo Quæsumus"; triple chorus,

"*Judex Credens*"; and a grand instrumental march for the presentation of the flags. The "*Te Deum*" is characterized by breadth of conception and execution, and is more free from eccentricities than many other works of this author. The explanation is, probably, that it was designed to form a contrast with more sensational parts of the larger whole, of which it was to form a part.

The most successful of Berlioz' works has been the "*Damnation of Faust*." This beautiful composition might well have been an opera, instead of a cantata. It is characteristic of Berlioz' taste for the strange and the uncanny, that in treating this legend musically, he should deliberately have confined himself to that view of it affording the fewest opportunities for illustrating the powers commonly understood to reside in the art of music. These, as every reader will see, were to have been looked for in the character of Marguerite, and in the love scenes, just as Gounod has treated them. Of these, however, Berlioz has made little; he has devoted himself mainly to the grotesque part of Mephistopheles, and his strange adventures with Faust. It is an illustration of Berlioz' powers of improvisation that on one occasion when he was thinking of bringing out a part or all of this work in Hungary, some one told him he could not hope for success unless he could contrive to work in the famous national air of the Hungarians, the Rakoczy March. No sooner said than done. He immediately recast the scene and laid it "upon the plains of Hungary," and the gathering of the clans was to take place to the music of an arrangement of this famous and soul-stirring air, which he straightway proceeded to score in the masterly way which all the world knows. The work is full of the daring innovations with which Berlioz delighted to harrow up the souls of the pedants. For example, the soprano ballad of the King of Thule opens with the unmelodic progression of an augmented fourth, the famous "*tritone*," against which musical theory has warned neophytes from time immemorial. Berlioz repeats this soul-harrowing progression over and over again. It forces itself upon the attention; it lingers upon the ear, and at length it becomes accepted as the most significant element in this most original and, when well sung, impressive melody. In other places, as in the "*Minuet of the Will o' the Wisps*," and the "*Dance of the Sylphs*," he displays a charming fancy. Both these are worthy of Shakespeare himself. Nothing more delicate has ever been written by any composer. The "*Ride to Hell*," on the other hand, illustrates the other side of the Berlioz activity. It is of the same piece as his own phrase, "*of a horrible grandeur*."

From this that has been said, it is evident that a master of this kind is one most difficult to classify. Upon the whole the probabilities appear to be that his works will increase in popularity for many years to come, and that he will be reckoned, as he deserves, as one of the most gifted and most inspiring writers who have adorned the art of music.

As for the attitude of Berlioz himself toward other composers, it is easy to see that a master so bold as he, so irreverent, so impatient of tradition, and so devoted to his own ideals, would have little patience with the merely conventional composers, who follow rather than lead. With the masters of the tone art, however, his relations were of the most cordial kind, as his writings evidence upon every page. Read, for example, his account of the Beethoven festival at Bonn, upon the occasion of the inauguration of the Beethoven statue there, in 1851. It is found in his "*Evenings in the Orchestra*," second epilogue. In all respects he was an incisive and intelligent critic, who could forgive everything but stupidity. His greatest value, perhaps, is to be found in the influence he has exercised upon other composers, and in his innovations in orchestra coloring. In this respect he is hardly to be counted inferior to Wagner himself.

CHAPTER THIRD.

RICHARD WAGNER—1813-1883.

THE CREATIVE GENIUS.

The life of Richard Wagner is one of the most stirring romances in musical history. The grand things which he undertook to create even in his childhood, the struggles with poverty and misunderstanding, his flights from land to land, his epoch-marking creations, and above all the magnificent and truly cosmopolitan success of his later years, the like of which no other master has ever experienced, go to make up a story as romantic as it is full of steadfastness and of heroism.

Richard Wagner was born in Leipsic, May 22d, 1813. His father was Superintendent of Police, a position of considerable responsibility; his mother was an actress. She was a woman of refined and spiritual nature. His father died while the boy was yet in infancy. Presently his mother married again, one Ludwig Geyer, a highly gifted actor and painter, who was soon engaged at Dresden, whither the family removed. Thus at the earliest age the boy was brought into intimate association with the stage. His step-father died when the lad was but seven years of age, who, even then, had begun to show a musical talent which the sick man noted with appreciation. A brother and sister of the composer became actors. Richard, however, had other aspirations. He had a taste for books and was sent to Leipsic to the Thomas school, where at first he greatly distinguished himself. Here he read his Latin and Greek with great success. At the age of eleven he would be a poet. He made a translation of twelve books of the "Odyssey," and a metrical version of Romeo's monologue. The Gewandhaus concerts called his attention again to music. He began to compose without having studied thorough bass. The experiment was not successful. He found a teacher and began to study. He copied out scores, particularly that of the ninth symphony of Beethoven, which affected him to tears. He learned to appreciate Mozart and Bach. All these diversions operated unfavorably upon his studies at school and being put back a class he lost all further interest in them.

At the age of twenty-one we find him at Magdeburg, conductor of the opera there. He proved to be an efficient conductor, and remained here until the troupe became bankrupt, in 1836. Then he spent a year at Koenigsburg, and later he held a similar position at Riga. In all these positions he had to teach the operas of Adam, Auber, Spontini, Bellini, etc., to his troupe, thereby acquiring a practical acquaintance with the works and with the stage, such as must have been of great use to him afterward. In 1837, at Riga, he began his "*Rienzi*." Political disturbances caused him to fly the country, and he set out for London. There he remained but for a few weeks and went to Paris, hoping to gain something through the influence of Meyerbeer. He remained in Paris for more than three years, trying all the while to get his "*Rienzi*" performed, but every theatre refused it. He was reduced to the greatest straits for means of living, and was even driven to arranging operatic potpourris for cornet-a-piston, as the only form of music for which he could get an order. While in Paris he composed the "*Flying Dutchman*," which had precisely the same success as "*Rienzi*," being refused everywhere. But a more promising day was about to dawn. "*Rienzi*" was given at Dresden in October, 1842, and the "*Flying Dutchman*" in January, 1843, with such success that he received the appointment of Hofkapellmeister. In 1848 he produced "*Lohengrin*." Being concerned in a political revolution he was compelled to fly the country. He went to Zurich, in Switzerland, where he resided from 1850 to 1861. Here he wrote a number of the pamphlets which stirred up so much opposition to him. He also conducted concerts from time to time, and conceived the plan and completed the poem of his "*Niebelungen Ring*." In 1860 he was called to Paris to bring out his opera of "*Tannhäuser*." There he composed the "*Meistersinger*" in 1861. His exile was terminated this year, and he made an extensive tour, bringing out his works at Vienna, Prague, St. Petersburg, Moscow, etc., and receiving everywhere ovations duly tempered with oppositions and misrepresentations. In 1864 King Louis I, of Bavaria, called him to Munich as musical director. This was the visible beginning of his triumph. Then followed the great art festival at Munich in 1865, the conception and ultimate fulfillment of the scheme for a national festival opera house at Bayreuth, the laying of the corner stone in 1872, the first festival in 1875, the performance of the complete trilogy in 1876, and the production of "*Parsifal*" in 1882, and, at length, in 1883 the sudden death of the master at Venice. Rev. H. R. Haweis, in his "*Musical Memories*," gives many pleasant particulars of Wagner's personal appearance and of his peculiarities. He was well-nigh adored by his servants, and in fact, by all who came into personal rela-

tions with him. Of his work and influence it would be impossible to speak in too high terms.

WAGNER'S IDEAL.

Wagner's ideal was nothing less than that of turning into the dramatico-lyric channel the whole rich stream of German instrumental music, as it had been developed by Bach, Haydn, Mozart and Beethoven. In other words, to compose an art work in which the entire resources of musical expression should be employed without stint, in conjunction with those of the dramatic poet and scenic artist. Each one of the elements in this richly composite whole he desired should be fully up to the highest creations of the best artists working in that province alone; while as to its psychological value he would have it explore and represent the deepest recesses of the human heart. Thus briefly stated this ideal is not different from that which, in words at least, all reformers have proposed to themselves, and particularly not so very different from the ideas of Gluck, who not only proposed, but actually did "reform" Italian opera, a century before Wagner. But when we come to study the course of development through which Wagner finally succeeded in realizing some part of his gigantic plan, we shall find at every step the traces of a powerful and far-reaching mind, and a comprehensive appreciation of the work done by his predecessors which is in itself a hopeful sign, and prepares us to find the results of his labors something quite out of the common.

From his earliest years Wagner had been in close connection with the stage. The drama exercised upon him the fascination which it never fails in exercising upon all persons of imaginative and susceptible temperament. Yet when he came to a better acquaintance with the lyric stage he was disheartened by its conventionality and consequent shallowness and falseness. Italian opera, he said, consisted of nothing more than a string of pleasing pieces strung together by a complacent composer for the display of the accomplishments of certain vocal virtuosi who had been chosen for every reason but that of dramatic competence. From the poetic side, and even from the dramatic, he found it still more shallow. He says:—

"Here, therefore, there was complete agreement in purpose, down to the smallest detail, because, while the composer composed for certain fixed voices and their individual characteristics, these in turn showed him the character of the variations he must make. In this way the Italian became an *art-genre* by itself, which, while it had nothing to do with the true drama, had also nothing to do with true music; for, for him who understands art, the decline of Italian music dates from the rise of opera

in Italy—an opinion that will be readily comprehended by any one who has gained a true conception of the dignity, the richness, and the unspeakably expressive depth of the Italian church music of the earlier centuries; and who, after hearing, for example, the *Stabat Mater* of Palestrina, can hardly believe it possible that the Italian opera is the legitimate daughter of so wonderful a mother. Poets, also, would not be left behind, but cheerfully curtailed their lyric productions of almost every vestige of real poetry, and, what was far more important, dramatic development. Rarely did a poet of decided merit condescend to write for the stage. When he did he took care not to be too wise for his task." So he writes. Yet when he became older, and as a practical director had to train a small company in the works of the lesser composers, Wagner found in all of them occasional movements of dramatic power in which words, music and the scenic movement united to form a whole which produced an impression as grateful as it was profound.

His conception of the possibilities of the music drama were strangely quickened through his seeing Schroder-Devrient as Romeo in Shakespeare's tragedy. He then thought of an art work which should give this wonderfully gifted creature an entire part equal to her full powers, and in which she should be supported and brought into dramatic conflict with other personages equally important, and equally gifted. Before he had reached this point of his meditation he had already written his earlier operas, in which he had worked out the earlier part of his ideal, that, namely, relating to the music.

Wagner's earliest musical impressions were derived from Carl Maria von Weber, who had brought out all his works at Dresden, where Wagner was then living. Of these the young composer said, that they filled his soul "with dreamy seriousness." No one of that generation was more alive than he to the lofty development which instrumental music had reached under Beethoven. He remarks that "Beethoven developed the symphonic form to such a comprehensive breadth, and filled it with contents of such unprecedentedly various and ravishing melody, that we stand to-day before the symphony of Beethoven as before the stone that marks the boundary of an entirely new period in the general history of art; for in it there came into the world a phenomenon, nothing even approaching which is to be found in the art of any other age or nation." He, also, more than any other of his contemporaries, recognized the inner relation existing between the works of Beethoven and Bach. Both had attained to perfect freedom in working out their ideas, according to the spirit of the age in which they lived, so that both, in spite of the technical difficulties of the forms in which they wrote, well-nigh succeeded in

imparting to their works the air of improvisations poetically conceived and masterfully carried out. What Wagner desired was, as already said, to turn this stream of serious music into the channel of the lyric stage, or as has been rather unkindly said for him, "to set the words of Shakespeare to the music of Beethoven." It is a matter of course that no such presumptuous proposition can be found in Wagner's writings, although it is perhaps suggested by the general tone of his remarks upon Beethoven and Shakespeare in connection with the falseness of the operatic stage. The effort to do this, necessarily led to a radical modification in the style of writing, a modification which extended to every part of the technical carrying out of the proposed art work, but the more particular consideration of the musical part of this will come in later, when "Wagner's style" is the matter of discussion.

Thus we see that what Wagner aimed at in his later works was not at all an "opera" for the entertainment of the fashionable world. On the contrary, he sought to unite the scenic, the mimetic, the poetico-dramatic and musical art into one homogeneous whole, dealing with legends and myths, which by their very persistence through centuries and millenniums, and through all families of the human race, show conclusively that they possess the elements of universal truth. By the terms of the union, each one of the elements had to give up its excrescences, its extravagances, and especially give up its meretricious tricks for catching applause, for the sake of loyalty to the leading idea of the work. Out of the combined effort was to come a complex but extremely absorbing interest, the depth of which would be concealed from the casual observer, in consequence of the masterly manner in which the soul would be approached through every avenue of sense perception. As Wagner somewhere says, he sought to produce a work having the character of an artistic improvisation, in which the art that conceals art should be so cleverly employed that the listener (or more properly participant) would give himself up to it as to a colossal fairy story of untold meaning. That he did this, and that he did it in the use of the most sacred and profound subjects, is the universal testimony of those who heard "Parsifal" at Bayreuth in 1882 and 1883. The afternoon at the "opera" became like an extremely impressive religious service, in which the elements were so perfectly blended that nothing incongruous was felt, and out of which sprang up a strange sense of religious exaltation and peace. This was the theatre as Wagner conceived it.

It would be very easy in this to overlook the extraordinary advances which Wagner made in each one of the provinces from which he had collected his art work. Perhaps the scenic display was as remarkable as any

part of his work. The most daring effects were made possible through the master's ready invention of new stage machinery. The scenery itself in "Parsifal" moved along the back of the stage like a panorama. One scene dissolved into another like a dissolving view. Every care was taken to convey to the observer only the ideal, and not to shock him with the clumsy real.

It would be presumptuous for a foreigner to attempt to pass an opinion upon the poetic construction of the Wagner pieces. As a prose writer he was clear, profound and fresh. As a dramatist, he was also clear, but somewhat too much given to monologue. These tedious talks, however, he explains and justifies upon the ground of their necessity in order to afford the listener time to comprehend the character speaking. What we are to think of when Ortrud waxes tedious in the second act of "Lohengrin" is not the patent fact that her long "solo" is not "pretty," but that in this long monologue she fully reveals herself as a personification of malignity and hate, and one in league with the evil powers. The length of time occupied is supposed to be concealed by the cleverness and dramatic suitability of the poetry and of the music in which it is uttered. Something farther may be done to shorten it by judicious action and by intense elocution.

The same element of universal length presents itself in several of the other selections which will be heard at the festival. The long farewell scene between Wotan and Brunhilda in the third act of the "Walkuere," contains no less than 1103 words of text, or almost as many as an entire "part" of Haydn's "Creation." This scene, also, is the finale of the opera, where the story comes to a climax, and where, according to the Italian composers, there should be a general gathering of all the performers upon the stage, an elaborately set "ensemble," and by all means a high note just at the close, for the prima donna. This would "bring down the house," whereupon Brunhilde would wake up and do it over again.

Perhaps as surprising as any other of Wagner's innovations, is the justice of his declamation,—by which is meant the appropriateness with which the music cadences, emphasizes and interprets the speech. In this respect his works stand to other composers as unapproachable models. This fortunate union of words and music rests equally upon a complete comprehension of the text, and upon that interior feeling for music which makes it to the artist the natural and well-nigh complete expression of feeling. This close adaptation of word to tone is, also, an element which almost forbids the successful reproduction of Wagner's operas in foreign tongues, although the elegance and practical correspondence of the English "Parsifal" text, both with the German and with the music, is such

as to show that the difficult is not always the impossible. There is, however, a deeper element which leads us to think that it will be a long time before these works will have a cosmopolitan currency. It is the intensely German nature of the subject matter, and their self-sacrificing completeness of detail, also a German excellence.

WAGNER'S STYLE.

There is no mental product which affords so much room for diversity of style as music, because there is no other form of emotional expression which contains within itself such a variety of elements. Roughly speaking, music consists of four great elements: rhythm, melody, harmony and tone color. As each of these departments is a complex province in itself, there is an unlimited scope for varying combinations between the elements. Hence an infinite diversity of styles; and by habitual recurrence of particular combinations in the works of one composer, a style of his own.

Every great composer not only establishes a style of his own, which in its ultimate analysis consists of the recurrence of certain sequences, but he imposes it upon other less individual composers by the sheer force of his genius, just as the sun lights whatever it shines upon without being aware of so much as the presence of the object illuminated. Yet the great formative minds in music have been very few. The greatest of them were Bach, Beethoven, Schumann and Wagner. Wagner is unquestionably one of the greatest musicians who has ever lived—a fact placed beyond dispute in the vigor of his style, which, starting out with abundant violations of the principles held sacred before his time, ended in impressing itself upon every intelligent composer of the whole world who has undertaken to write within the last twenty years. Indeed, the current remark of criticism, that “the style somewhat resembles Wagner,” might properly be reversed and made to read of the exceptional cases only: “is further proof of the superficiality of this composer, that his style in no way resembles Wagner.”

In order to define the peculiarities of Wagner's style it will be necessary to premise briefly concerning the styles of his great predecessors. And first of Bach, who stands at the beginning of modern music. The prevailing spirit in Bach's work is the contrapuntal, for this was the mannerism of his day. Counterpoint was the technical school out of which alone a flowing melody could spring; for counterpoint teaches what moving notes may be sung in connection while another voice holds a single tone. Counterpoint is the art of intelligent melodiousness in music. Then, too, Bach is also fugual. Fugue is a form of composition in which one voice proposes a subject which when completed is

immediately answered by another voice in another key with the same subject. The laws of fugue define the proper limits and relationships of these answers, and consequently to a considerable extent the tonal construction of a piece, *i. e.*, the succession of keys which should follow a given beginning. Fugue, therefore, was the settlement of the manner in which, according to the ideas of the first part of the eighteenth century, a composition dealing with a fixed subject should be developed by a consensus of voices. Thus, in being a great contrapuntist and fugueist, Bach was at once a great melodist and a great harmonist. He was also a master of rhythm; but neither of these was his greatest claim to consideration. He had a key to the whole riddle, he had penetrated to the very centre of the whole matter; that is to say, he had a true instinct, or intuition, *of the relation of music to feeling*. It is this, in connection with the technical qualities aforesaid, which gives his instrumental works a hold upon this generation, such as no other works of his day possess a tithe of. Hence, taking all these things together, the one distinguishing trait of Bach's music is its coherence. One of his pieces is like a crystal—so pure, so firmly knit together, yet apparently so voluntary in the lines of its facets. *It belongs so*, is the feeling which almost any piece of Bach's awakens whenever it is well presented.

Yet the Bach unity is somewhat excessive. The contrapuntal style, the habitual strictness of modulation, and especially the prolonged discussion of a single subject throughout a piece, impart to it a severity which not even the beauty of it can wholly conceal. The great advance which Beethoven made over Bach's mode of constructing music pieces consisted, first of all, in relieving the overtired attention by the interposition of a second and contrasting subject. Bach tried this a little; Haydn and Mozart went much further, and, in fact, discovered the main lines along which contrasting subjects must follow each other in order to afford a proper relief. Neither Haydn nor Mozart had any great hold of music as the expression of emotion. Or more properly, perhaps, neither of them had any great depth of feeling to express by means of music. But Beethoven was a man of a different type. While he was pre-eminently a *musician*, an organization within which all outward impressions related themselves more or less to music, he was also a man of vigorous intellect, and an interested and acute observer of men and things about him. Beethoven's technical mastery of the art of developing a musical idea was fully equal to that of Bach's, though, as befitted a later generation, it was of a different kind. A striking proof of his power was given in the famous thirty-two variations which he wrote upon an insignificant waltz. Out of the commonplace theme he went on weaving

more and more that was "rich and strange," until the publisher begged him to cease, for in asking a set of variations he did not desire an encyclopedia. This fertility of invention was the outward evidence of a never-ceasing inward phantasy of music, which every agreeable outward experience entered into and increased. This is the secret of his fondness for the open air and for the country, where for hours, and even a whole day together, he loved to lie under a tree and contemplate. That music continually went on within him, we know from his habit of singing the melodies, and from time to time making a hasty note in the blotting book which he always carried for the purpose. But when it came to the actual moment of speaking to the public by means of musical combinations, Beethoven had always something of pith and moment to offer. It was the same old story; he had the intuition of the relation of music to feeling. Yet in expressing himself he proceeds differently from Bach. He has more of simple accompanied melody, and his elaborations are mainly a light thematic work, in which the leading motives of the piece are turned over as in a kaleidoscope. The leading melody preponderates over the harmony which accompanies it, but without allowing the harmony to sink into the helpless idiocy of Italian opera. The Beethoven music, as a whole, therefore, is lighter than Bach's, and more fanciful. Yet Beethoven could be extremely profound when it suited him to be so, but in many of these cases, also, it is the melody which leads in the depth and seriousness. In thus giving greater importance to the melody Beethoven followed a true instinct.

There is in Beethoven's style one quality which no careful listener can fail to observe, namely, *repose*. However agitated or confounded, he does not pass beyond a certain reserve, which leaves the impression of an intended artistic repose. This appears in every part of his work; in the ease of his melodies, the generally simple harmonies, the sparing use of dissonances, and, except at the climaxes, a moderate demand upon the instruments through which he happens to be expressing himself. This quality, combined with his strength, renders Beethoven peculiarly a composer of instrumental music. When he has to write for voices, they are but as other instruments. The graphic exaggeration of the suggestions contained in the text, such as we find illustrated upon the largest possible scale in the "Tuba Mirum" of Berlioz' "Requiem," was entirely foreign to Beethoven's thought. The voice was to him something sacred, and he treated it with even greater reserve than he would an instrument.

Beethoven has also another trait of special value to a composer of instrumental music. It is that of clear form. By form is meant the

internal organization of a piece into first, second and third subjects, modulating interludes, elaborations, conclusions and the like, by the aid of which the listener comprehends the piece in its entirety. Beethoven is often said to be less clear in form than Mozart. So he was in two ways. His period forms are more varied, and, like Bach, he weaves long stretches of continuous discourse, corresponding to long paragraphs of writing without a full stop. He is also less clear, because more profound. But in general, Beethoven's forms are masterly, especially in one point, namely, the coherence of the whole into an organic unity. This quality is not easy to define, or even to point out by technical analysis. But every close observer will recognize it in Beethoven's work. Hence we conclude upon the whole that while Beethoven availed himself of the free and natural melodies of Haydn and Mozart, and, indeed, developed his largest works out of dance forms, he yet manages to so dispose his melodic subjects and the treatment of them as to convey the impression of coherence, the outward aspect of which is artistic reserve and strength, and the inner, the natural expression of strong feeling.

After Beethoven there was a digression which had the greatest possible effect upon Wagner. In the works of Schubert, Carl Maria Von Weber, Meyerbeer, Berlioz and Schumann the romantic element had a most vigorous development. Schumann, indeed, can have had but little effect upon Wagner, for the latter had already begun to work out his logical conclusions before any of Schumann's works had found currency. Now, the essence of romanticism in music is the effort to represent, by means of musical combinations, actions, events, scenes or complications which require poetic description or an accompanying text to make comprehensible. In this effort the bounds of musical expression were enormously enlarged in every direction.

The attempts at descriptive painting in the orchestration of Haydn's "Creation" are the still earlier beginnings. Schubert's five hundred songs are but so many attempts to employ music in this way. The natural effect of long-continued efforts of this kind was to break up all the traditions of musical composition, and to give, in place of them, the dangerous maxim that "the end justifies the means." Thus the bonds were cast off at every point, and, but for the conservative influence of the schools, there was nothing to hinder composers from rushing into every kind of extravagance.

Yet the composers of the new school brought with them their own correctives. The works of Sebastian Bach awoke from their long slumbers and began once more to be studied by composers, performed in public by enthusiastic musicians, and here and there appreciated by the public.

Nothing more fortunate could have happened. The Bach coherence, depending as it does so largely upon harmonic sequence and the preponderance of a single motive, was exactly the clue which Wagner needed as a guide to the elevated style which he sought. With the Bach revival there came another, hardly less important. It was that of Palestrina, the great Italian writer of church music, whose superiority to mechanical rhythm, and especially the elevated and spiritual effects which he secured in his own way, gave Wagner yet another aid to the flexibility of style which he sought.

Thus we trace the following extremely diverse elements, each one highly appreciated by itself, and all operating upon the young composer at the moment when his original style was to be formed. They were: The people's song, as we see in Von Weber's operas; the sensationalism of Meyerbeer; the fine melodic quality and the fullness of Beethoven; the Bach coherence and harmonic inexhaustibility, and the dignity resulting from it; to which must be added Palestrina's elevated strains of pure harmony cadenced only by the convenience of the text.

These remarkable influences coming to a focus upon an individuality so bold and daring as that of Wagner, and one so phenomenally gifted with musical feeling, and with an extremely vigorous mind, are sufficient to account for the altogether new flavor which Wagner brought into his first successful work, "Rienzi." By the time he had gotten through the "Flying Dutchman" and "Tannhäuser," the Wagner style had assumed an individuality of as pronounced a flavor, and yet as self-evidencing upon acquaintance, as any style which any composer, however eminent, had written before or has written since. The particulars of this style it is not easy to define, especially in the earlier works. The "Pilgrim Chorus" in "Tannhäuser," for example, contains no two successive chords which any good master might not have joined. Yet as a whole, in its combination of singularly strong melody, supported by harmonies which it is an ever-fresh delight to follow, it could never have been written by any composer but Wagner. Perhaps the general impression of the Wagner style is better conveyed by the term "elevated" than by any other. The elements of this elevation are to be found primarily in the absence of trivial rhythms; second, in the close correspondence between the movement and emphasis of the text, and the music which utters it; but mainly in the noble harmonies. Wagner invented no chords; he generally resolves his dissonances according to strict rule. He makes various enharmonic changes which were unknown to the composers of Bach's time. But after almost every one of his chord sequences have been traced to some older writer, the fact remains that, excepting a

few places where he has purposely restricted himself to the simplest resources of the people's song, there is scarcely a consecutive eight measures in Wagner's works which could have been written by any other composer.

In his later works his always close harmonies have become more involved and chromatic, and he has introduced more and more of his "leading motives," a musical device not unlike the "historical allusion" in composition, where a single phrase opens for the reader an entire vista of the past. Much more has been made of these "leading motives" than they deserve. In a few cases a particular motive is purposely placed where the listener cannot help but observe it. Such a case is the use made of the "motive of warning" in "Lohengrin." When Lohengrin first appears and has overcome Telramond before he weds Elsa, he twice cautions her that she must never, as she loves him, ask his name or home. In the final duet, when Elsa approaches the fatal question, this motive is heard softly in the orchestra; then more plainly, and finally, just at the moment of the question, it is given out by the brass with great force. A similar artificial use of leading motives is made in all his later works. But after all, the decisive leading motives are few, and they are sparingly used, or rather, in a majority of cases, are so transformed in use that they serve the composer merely as convenient material, but they do not come to the recognition of the average hearer.

There are yet two other elements of style which are to Wagner elements of strength and beauty, but which, nevertheless, cut him off, to some extent, from the popular ear. The first of these is what is called his "want of melodic form." It used to be called his "want of melody." Now concerning melody we cannot do better than to begin with what Wagner himself has said of it in his "Art work of the future." He says:

"Let us establish first of all the fact that the *one true form of music is Melody*; that without melody music is inconceivable, and that music and melody are inseparable. That a piece of music has *no* melody, can therefore only mean that the musician has not attained to the real formation of an effective form that can have a decisive influence upon the feelings, which simply shows the absence of talent in the composer—his want of originality compelling him to make up his piece from hackneyed melodic phrases to which the ear is utterly indifferent. But in the mouth of the uncultured frequenter of the opera, and when used with regard to real music, the expression of this opinion betrays the fact that only a fixed and narrow form of melody is meant, such as belongs to a very childish stage of musical art; and for this reason an exclusive liking for such a form must also seem childish to us. In this case we have less to

do with *melody* than with the primitive and narrow form of it,—the *dance* form (*Tanzform*)."

In his "Tannhäuser" and "Lohengrin" there is no want of melodic form. Elsa's dream is as good a form as need be. So, also, is the "Romance of the Evening Star," the "Pilgrim Chorus," etc. But in a considerable part of "Lohengrin" the melody is continuous and does not return and complete itself into rhyming couplets as popular songs do. It devotes itself to the text and goes on, and on, and on, as long as the text goes. Meanwhile the listener who sat down at the end of the first eight measures waiting for it to come around again, has become very tired of waiting. But if, instead of waiting for the melody to come back and finish itself up, he had himself gone forward with the words, he would not have become tired. The continuity of the arioso declamation of Wagner is attained by the same means as that of Bach, namely, by motive work and the avoidance of complete cadences. Hence it is only occasionally that Wagner has melody in the Mozart sense of the term. Even in the instrumental pieces like the "Ride of the Valkyries," the "Magic Fire Scene," and the Siegfried funeral march, while there is form in a true sense, it is a large form, which is not to be wholly seized upon the first hearing. There is also another element here. It is that a truly coherent form may leave an impression of completeness upon a listener who might have been unable to analyze the work and point out the method of its beginning and ending. The moral of which is, that the listener who will go along with the music will find, after a few hearings, that it has form.

The other element referred to above is the richness of the orchestration, in which respect Wagner is to be placed above all other writers. To begin with, he writes for more voices. The strings are generally divided into eight or even twelve parts. The wood-wind has complete and sometimes reduplicated harmony of its own; so also has the brass. The result is a rich volume of sound, which is more like a mighty river of tones than anything else one can think of, or like the sound of a great organ, swelling and sinking in the distance, under the touch of a master.

But to return once more to the consideration of Wagner's method of thematic treatment, as illustrated in his use of "leading motives" in his later works. It will remain for some time longer uncertain whether his method of obtaining unity through the transformation of a few leading motives affords opportunities for variety and relief equal to those afforded by the less artificial methods of Beethoven and Mozart. It can hardly be denied, even by the admirers of this great master, that there is a sense of monotony experienced in listening to several of his operas on successive evenings. It is true that something of this sort is experienced whenever one

listens to several operas in succession from any composer ; and, besides the sense of monotony, there is commonly a sense of weakness. The range of most composers' minds is so limited, that when they have once sounded their ranges of chords, and when we have lately been delighted by their peculiar graces of melody, we are content to await a time some distance in the future, before desiring to repeat the experience. This is true of such consummate masters, in their several ways, as Rossini, Donizetti and Verdi. But in Wagner's style there is an element of monotony not found in theirs, due to exceptional demands which his music makes upon the intellectual faculties. Perhaps the most conspicuous example of this is the "*Gotterdæmerung*," that colossal ending of the series of "*The Niebelungen Ring*." The entire series of the Trilogy contains upward of seventy-five motives, which cut sufficiently important figures to be catalogued and recognized when heard. Some of these occupy the attention in a prominent manner throughout one or more scenes, after which they are not heard from until their story comes up again in the sequel. Others are touched upon only a few times, and do not force themselves upon the attention of the hearer. In the "*Gotterdæmerung*" all these motives are brought back and worked upon together, in a way which can only be characterized as stupendous. The intellectual demands of hearing this opera intelligently (that is, in such a way as to recognize these motives as they occur, together and separately, and to appreciate the allusions and relations which they are intended to bring back) is a task beyond the powers of the most gifted musician, without more than a single hearing. No art work has ever been created, in the opinion of the writer, calling for such a concentration of the attention in order to appreciate it fully. Nevertheless, this is not to say that a hearer will fail to derive a high and wholly peculiar satisfaction from his first hearing of this opera, even if he does not find himself able to seize and enjoy all its evidences of the composer's mastership. There is in this work a power, a combined engagement of all the faculties of intelligent listening, which renders it one of the most impressive musical works in existence. Yet, in spite of the mastership shown on every page of the work, there is in it an element of monotony which is even greater than in the other works of his earlier years. The source of this impression is not to be found in any lack of variety in the musical handling, but in the presence of a variety so abundant that the mind is unable to take cognizance of it at a single hearing. Besides, the elements of unity in the work are outside the music, or rather in a different quarter from that in which they are found in musical works in general. The very effort to listen carefully, and the strain upon the feelings exercised by this powerful but sombre

story, are such as to place "Gotterdæmerung" entirely outside the range of operas in general. Nevertheless, there is reason to think that the time may not be far distant when this work may become one of the most universally appreciated of all of Wagner's operas. The principles of unity which so greatly eluded the ears of those to whom Wagner first presented the work, have been explained often, and another generation has had time to come upon the stage of action, bringing to the task their more complete musical organizations and the results of their more elaborate musical heredity. To these the tasks of the "Gotterdæmerung" will in a short time become as easy as those of "Lohengrin" have become to the children of the hearers who found its first presentations unendurable. Still, to whatever extent this may prove to be the case, it will always remain true that the proper hearing of this, or any of Wagner's operas, will continue to make demands upon the concentration and intelligence of the hearer, far beyond anything in the works of the Italian writers, or even in those of Beethoven, and far beyond anything that it will be reasonable to expect of any hearers, as a mere pastime. The impression of monotony will still persist, because its source will lie in the concentration of attention which the intelligent hearing of these works will always require, and which, however easy it may become to later hearers, more expert in musical coördinations, will, nevertheless, always and necessarily have the character of half-conscious comparisons of an intellectual nature; and in this fact there will always be a distinction between these works and those of writers intending to be heard upon the run, as it were; that is, by the exercise of the average musical powers of careless hearers. In addition to this ingrained element of monotony in the works, there is the farther one of the want of relief in the story itself. Wagner's lack of humor is not likely to become any the less obvious as the years go on. He is serious; and seriousness is necessarily monotonous, especially in a work of art requiring four hours to hear.

Nevertheless, the innate nobility of Wagner's style, and its consummate originality and mastership, are qualities which can only become more and more admired as the nature of musical discourse is understood. To its steady flow of movement, unséparated into rhyming periods, this rich and full body of sound, so organ-like, so earnest, so magnificent, like a purple robe of music's king, this pregnant suggestion of leading motives, and, above all, this dignified and even god-like progression of fundamental harmonies,—qualities like these can only become perfectly recognized and admired as they are understood. Others have imparted grace to music; seriousness was there before, in the works of Bach and Beethoven; but this consummate union of nobility, depth and fullness belongs to Wagner alone.

CHAPTER FOURTH.

RICHARD WAGNER—HIS EARLY PERIOD.

The creative career of Wagner naturally divides into two parts. The first includes all the earlier works, and ends with the production of "The Mastersingers," in 1867. The second relates exclusively to the colossal Trilogy of the Niebelung's Ring and "Parsifal," together with the equally gigantic conception of the festival-theatre at Baireuth. While the earlier works contain passages which represent Wagner's genius in eminent splendor, this is, nevertheless, not true of any of these works as wholes, nor of any single one of them within itself. One and all, they are characterized by hesitancy, and imperfect execution of his ideal of "a music-drama, at one with itself in all its parts," and totally disregardful of *ad captandum* expedients for catching applause. In the works of the later period, which, indeed, interlocks with the first to some extent [since the composition of the Niebelung Ring was interrupted to permit his finishing "Tristan and Isolde," and, again, the "Mastersingers"]], the consistency is more complete. In this case it exceeds that of any other art works produced since the days of Aeschylus and Sophocles, being from first to last a loyal attempt at embodying in tones and scenic representation a comprehensive artistic conception, without the slightest idea of conciliating any person whomsoever. If there be any other creative work in the history of art to compare with this of Wagner's, for self-devotion and concentration, it can only be found in the Masses of Palestrina and in a few of the works of Bach. Everywhere else in the whole history of art, we find traces of the modification of ideal considerations, out of regard to the convenient, the practicable and the popular.

Yet, while the earlier works of this great author are not constructed in such perfect conformance with his self-chosen principles of art as his later works, they are, nevertheless, works of real creative genius, which have advanced and ennobled the ideal of operatic construction beyond anything of any writer before him; and they would have done this equally well if they had not been followed by the colossal masterpieces of his latest period. The latter, indeed, throw light upon the works of the earlier period, by revealing the full meaning of the half-realized suggestions in them. These, in time, would have been recognized at their

full value by the gifted class of composers, without the help of the later works, and in this would have been felt presently as a leaven in the progress of art, to nearly or quite as great an extent as when helped by the music dramas of the later period. In one point of view, their influence might even have been more active without the overshadowing presence of their later brethren. For, concerning these earlier works it cannot be said that Wagner went too far ; since one and all, excepting the enormously difficult "*Tristan and Isolde*," they have become popular in the best sense of the word. For a full generation, now, they have held the German stage with a popularity which steadily grows, and which exceeds that of the works of any other operatic composer whatever. Outside of the Fatherland, it is true, their popularity has been more factitious, and due to the less lasting influence of a cult not having its roots in the national consciousness. But in Germany, in spite of the disposition to run after new lights, and in spite of the difficulty of interesting an amusement audience in works so serious and so sustained, not to say so monotonous, the Wagner operas, and more particularly "*Rienzi*," "*Tannhäuser*," and "*Lohengrin*," appeal to the hearers with irresistible force. No other music dramas attract so many or so large audiences. Nor is there any near prospect of their popularity waning. They depend upon so many elements of national taste, that it is difficult to conceive of a composer capable of displacing Wagner, for many years to come. The poetry, the legends upon which they are founded, and the serious and noble character of the musical setting, all answer to ideals which are distinctly German. In England, also, these operas, under the direction of Mr. Carl Rosa, have gained wellnigh an equal popularity. Indeed, take the world over, and no opera of the present century has had an equal success with "*Lohengrin*." Critics may rail at them, as they do from the most opposite standpoints, as being too dull, too heavy, too serious ; and, again, as being too light, too disregardful of the Wagner ideal, too crude in carrying it out, and all that. They may be followed by Italian sweetness, of the Bellini and Donizetti kind, but the popular taste persists in finding in these works of Wagner something of a commanding kind which the others lack. Thus it has been from the time when they were first produced, and thus it has been in every country in which they have been produced. Thus, also, there is reason to expect that it will continue to be for generations yet.

The full roster of the works of the earlier period, with date of their first performance, is this :—

- "*Rienzi*," 1842.
- "*The Flying Dutchman*," 1843.
- "*Tannhäuser*," 1845.
- "*Lohengrin*," Aug. 28th, 1850.

- "*Tristan and Isolde*," 1862. Munich, June 10th, 1865.
- "*The Mastersingers*," Munich, June 21st, 1868

The statement of his principles belongs also to this period. "Opera and Drama" was first published in 1851, and, therefore, occupied his attention at the time when he had just finished "*Lohengrin*," and the works may well enough be accepted as mutually explanatory. The following is a brief account of each of the operas of this list.

"RIENZI—THE LAST OF THE TRIBUNES."

It is the fashion of many of the admirers of Wagner to speak contemptuously of "*Rienzi*" as representing a hybrid style, in which the great master was neither one thing nor another. This attitude, which was that of Wagner himself toward this work in his later years, is eminently unjust; for, as compared with the works of Rossini and Meyerbeer, with which at the time of its composition it came into competition and comparison, "*Rienzi*" is full of originality. Its melody is still after the Italian pattern, and Wagner does not yet disdain the provision of long and elaborate ensembles, which are calculated, with a thorough understanding of the resources of the dramatic composer, for bringing down the house. For the young composer to have written otherwise, while he had as yet been unable to obtain a hearing, would have been the height of imprudence, even if the process of development did not make it necessary for even so great a master as he to come to his full powers by a course of growth and intelligent experiment. Whatever may be thought of "*Rienzi*" in the light of the later operas from the same teeming brain, in its own day it had enough of beauty and originality to secure for its author one of the most influential musical positions in Europe—that of Kapellmeister at Dresden.

"*Rienzi*" is founded upon Bulwer-Lytton's novel of the same name. The story had occupied Wagner's attention at intervals for years, until he found, in disgust, that he was composing it in the style of Donizetti. He threw it aside for some time, but in 1838 he had it well under way in the new form he had planned for it. Two acts were done in 1839, and the whole work was performed for the first time in Dresden, October 20th, 1842. The overture, which is in what is called the "accepted form"—that is, composed of the principal motives of the work—is a general favorite in the concert room. Among the more pleasing numbers are the prayer of Rienzi in the last act, a melody worthy of any master who can be named; in the second act there is a chorus of the messengers of peace, strongly foreshadowing the Bridal chorus in "*Lohengrin*." The part of Rienzi is rather long and heavy. The spectacular effects, however, are unusually brilliant. Throughout, the influence of Meyerbeer is plainly apparent. It was composed in the

hope that this great composer, then at the height of his fame, would exert his powerful influence to secure its acceptance at the Grand Opera in Paris. The hope proved delusive ; nor was it reasonable to suppose that the good offices of a rather sensational composer could be obtained for a new comer, who proposed to contest the palm with him upon his own ground, that is, upon the spectacular stage. Very likely Wagner would have fared better if the work he offered for the suffrages of his predecessors had been less original and less masterly.

“Rienzi” is doubly interesting on account of the testimony it gives that Wagner’s originality was the working out of his own idea, and not something that he took up from without. In this work, composed, as we have seen, in the hope of meeting the approval of the stage—where, for quite a number of years, Meyerbeer had reigned supreme, and where Rossini divided the dominion with him—Wagner was unable to confine himself to Italian methods, although in several places he shows himself a master of them. From first to last, “Rienzi” shows the tendencies of the later Wagner works. The recitative is largely arioso, there are long passages of soliloquy or speech making, and the harmony has that mysterious coherence peculiar to Wagner’s manner of associating chords. Italian as it is, “Rienzi” could only have been written by Wagner ; and by him only at a time when, as yet, he was feeling after the style which, later, he completely attained.

“THE FLYING DUTCHMAN.”

The “Flying Dutchman” was written nearly fifty years ago, having had its first production at Dresden, January 2d, 1843. The libretto is founded on Heine’s version of the legend. The dramatic structure of the play is simple, effective, and well contrasted. It was originally designed to be played in a single act. This, for the sake of unity. It is now played in three. The first takes place in the little bay where the ships of Vanderdecken have taken refuge from the storm. Here are male choruses, the pilot’s beautiful song, the monologue of the Flying Dutchman, and the duet between himself and Daland. The second act takes place in Daland’s home, and makes us acquainted with Senta, and afterward brings in her would-be lover, Eric, and, later, the Dutchman himself. In this act there is a female chorus. The third act takes place on the quay, the peasants on shore, and the sailors on the Dutchman’s ship, which presently sets sail and departs. The stage situations are simple, plausible and effective. Already, here is a music drama with a conceivable plot. The musical contrasts in the work are fine. The work opens with the sailor’s song ; bold, wild, and original. Then follows the Pilot song,

which comes very near the spirit of the Italian aria. Much that follows between Vanderdecken and Daland is a little tedious, but the act concludes with the sailors' chorus that opened it. In the second act, the music brings Senta's very striking ballad, the legend of the Flying Dutchman, and the spinning chorus of the girls, as well as considerable that is less intelligible. If the standpoint be once conceded that opera is a music drama, and not simply "play," there is nothing in this work but possesses interest. In it Wagner has not overstepped the ability of music.

"TANNHÄUSER."

The opera of "Tannhäuser" was composed in 1842-4; it had its first performance at Dresden, in 1845. The story is founded upon an old Thuringian legend. Tannhäuser, a knight and a minstrel, had disappeared for a long time, during which he was thought to be dead. He was really in the Venusberg, a mountain not far from Wartburg, within the recesses of which Venus held her court. Thither she enticed such mortals as she could, and there they remained forgetful of their earthly duties amid the orgies of her service. Here Tannhäuser abode seven years. At the end of that time remorse overtook him, and, with a great cry to the Virgin Mary, he found himself outside the mountain and once more among his friends. As he emerges from the mountain he hears the chant of the pilgrims starting upon their long journey to Rome. Their holy song awakens his purer aspirations, and he sinks upon his knees in prayer. Scene IV introduces the Landgrave and the minstrels, who greet Tannhäuser and invite him to a contest of song upon the next day, incidentally informing him that he had gained the love of the Landgrave's daughter, the Princess Elizabeth.

The second act opens with Elizabeth alone, who rejoices at the news of Tannhäuser's return. Tannhäuser enters and Wolfram, afterward the Landgrave, and this scene ends with the march, as the guests gather for the tournament of song. At the contest, several sing in praise of love, but so coldly that Tannhäuser reproves them with the declaration that they know not what love is, whereupon he breaks forth into an impassioned ode to Venus. At this, Elizabeth is overcome with shame and grief, and Tannhäuser realizing what he has done, rushes from the assembly, an outcast. At length he resolves upon a pilgrimage to Rome, that he may find forgiveness. The third act opens with an orchestral introduction called "Tannhäuser's Pilgrimage." Tannhäuser returns with the elder pilgrims, who sing the hymn which forms so marked a feature of this work. Elizabeth is praying at a wayside shrine. Then Wolfram, alone, sings the beautiful romance of the Evening Star, after which Tannhäuser's account of his pilgrimage and of his as

yet unforgiven state. He calls anew upon Venus, who appears. Elizabeth dies, thereby releasing Tannhäuser from the magic of Venus, the song of the pilgrims is heard, and Tannhäuser also dies, pardoned and at peace.

Throughout this work there are two strong marked threads. They are the voluptuous love-music of the Venusberg, and the solemn, almost church-like, songs of the elder pilgrims and of the Princess Elizabeth. The overture is a summary of the whole opera. The music of "Tannhäuser" is much clearer than that of the later operas, because it contains a larger number of fully-completed pieces which can easily be separated and heard outside of their connection. But, while this is the case, it is also true that the style throughout is characteristically Wagner's. It forms, therefore, the natural introduction to his later works. In order to be appreciated, it needs only an adequate performance and a certain earnestness upon the part of the listener.

"LOHENGRIN."

"Lohengrin" has had the most unquestioned success of any of Wagner's works. Not only has it acquired a foremost place in the German operatic repertoire, but it has established itself upon the Italian stage. It was composed in 1848-50, and had its first performance at Weimar, under Franz Liszt's direction, upon Goethe's birthday, August 28, 1850.

The story of "Lohengrin" is in part derived from the Arthurian legends. Lohengrin is a knight of the Holy Grail, who has left that mysterious and sacred shrine for the succor of the Princess Elsa, of Brabant, wrongfully accused of the murder of her little brother, who has mysteriously disappeared. When Elsa is summoned before the king, she appeals to the wager of battle and tells her dream, how a splendid knight came to her deliverance. The combat is proclaimed and the heralds sound their trumpets to call forth her defender; but for a long time in vain. At length he appears in a boat drawn by a swan. He lands, and his boat sails back. Lohengrin promises to defend Elsa if she will give him her hand. She joyfully consents. Then Lohengrin cautions her that upon no account must she ask his name or station. He repeats this caution solemnly to this motive, which is called the "motive of warning."

"Never as thou dost love me, Aught shall to question move thee,"



"Nev - er as thou dost love me, Aught shall to ques-tion move thee,"

Elsa promises. The fight takes place; Frederick, her accuser, the husband of Ortrud, the evil genius of the piece, is overthrown. Lohen-

grin is then made Defender of Brabant. In the first scene of the second act, Ortrud and Frederick appear in common garb sitting upon the steps of the cathedral opposite Elsa's palace. Ortrud reveals her bitterness and hate. In the second scene Elsa comes upon the balcony and sings to the bright moon her love. This number is exquisite. Ortrud hears her. At length she interrupts Elsa and asks for aid. Elsa comes forth and takes her to her heart. They enter the house together. The long duet preceding this, between Frederick and Ortrud, forms a dramatic contrast with this duet of Elsa and Ortrud, because in that duet the evil disposition of Ortrud was fully revealed. Then follows the bridal procession. Later the wedding march, the bridal chorus, and the long duet between Lohengrin and Elsa upon their return from the ceremony. This begins with the fullness of love, only to end in doubt and disaster. The misgivings which Ortrud has instilled into Elsa's mind cannot be soothed; at last she utters the fatal question which destroys her happiness. It is one of the commands of the Grail that during their absence upon errands of service its knights shall not be known. When asked their name and station by those who have the right to ask, the answer is immediately given, but the knight must at once return to the castle of the Grail. As Elsa approaches the fatal question the motive of warning is heard. Lohengrin solemnly charges her not to doubt him. At this point the motive comes out clear by the oboes, clarionets and English horn. At the moment before the final question Lohengrin himself sings the warning, which has just been powerfully intoned by the brass.

The music of "*Lohengrin*" is much more refined and beautiful than that of "*Tannhäuser*." It shows an increasing avoidance of rhythmically completed lyric forms, and a greater abundance of what Wagner calls "endless melody." Many parts of the work would be tedious but for the dramatic interest which justifies the long speeches. Particularly is this true of the duet of Ortrud and Frederick. That duet contains none of the elements which, according to an Italian standard, should belong to an operatic duet. "*Lohengrin*" also makes more use of leading motives. Besides the motive of warning, already given, there is a beautiful motive especially appropriated to Lohengrin—another to the swan—another to the Grail. The prelude of this opera is one of the most beautiful of all the Wagnerian pieces. It has been played everywhere. It is interesting, also, to note that although Wagner composed this beautiful prelude so long ago as 1850, and had abundance of time to realize its popularity, he never made the slightest attempt to imitate it in his subsequent works, saving, possibly, in the prelude to "*Parsifal*," where the similarity of the subject led him into a closer

resemblance to the "Lohengrin" prelude than in his other works. If one were asked to name in one word the crowning beauty of "Lohengrin," it would be its entire *consistency*. The story, the text and the music are all of the most refined and masterly description. Its production marked an epoch in the history of the German lyric stage, and it has had an all-pervasive effect upon composers everywhere.

TRISTAN AND ISOLDE.

The following paragraphs, upon "Tristan and Isolde" and the "Meistersinger," have been expressly prepared for this work by the well-known Wagner scholar and composer, Mr. Frederic Grant Gleason. Aside from the fullness of Mr. Gleason's descriptions, these analyses have the merit of presenting the leading motives of these operas with the full meanings, or descriptive powers, commonly attributed to them by those belonging to the inner brotherhood of the Wagner cult, distinctly so-called. Mr. Gleason begins:—

"Tristan and Isolde" occupies a peculiar place among the Wagner operas. In this work, more than any other, the composer was swayed by his feelings, unhampered by the conventionalities of formal structure or accepted laws of tonal relationship. There was not the slightest attempt to conform to the customary methods of stage treatment. He wrote as he was inwardly moved, without deliberate attempt to carry out any theories, but simply in obedience to the dictates of his own feeling; in fact, the opera possesses some of the qualities of an improvisation, the writer having given free rein to his fantasy, wholly ignoring all considerations of policy. Yet, in spite of this, the work carries out his theories in the most uncompromising manner. The opening phrase of the Vorspiel is characteristic of the whole opera in its absolute freedom from constraint and defiance of law.

It is the motive of the "Love Potion:"

oboe.

'cello.

The part of the motive entrusted to the violoncello belongs to Tristan, that assigned to the oboe to Isolde. Next comes the "Tristan" motive:

Upon the last note of which enters the motive of the "Love Glance:"



presented by the violoncellos.

Other motives of some importance are those of "Tristan's Suffering" (1), and "His Longing for Isolde" (2).

In the Vorspiel these motives are woven into a marvelous web of tone, culminating in a phrase expressive of the delirious intoxication of passion :

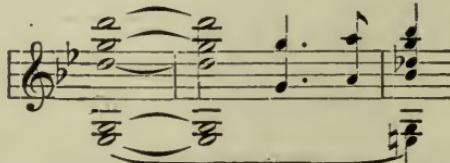


This design is magnificently developed, and after a climax of marvelous potency the Vorspiel sinks away, and, with repetitions of the various motives, is brought to a close.

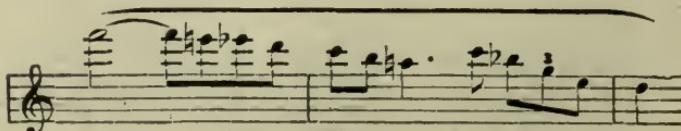
The phrase in which Isolde, in her anger, devotes the hero to death, is the motive of "Death :"



At the beginning of the introduction to the second act, is heard the motive of "Love's Glory :" -



After a few measures the motive of the "Love Call" is heard :



soon followed by the motive of "Ecstasy":



In the great love duet in act second the motive of the "Love Death" is heard, as the blissful pair long to die in each other's arms:



These are a few of the most important motives which appear in an almost endless variety of forms in the course of the drama.

The love potion acts the part of fate in the tragedy, and furnishes the key to the entire development of the plot. At first the hero and heroine, though loving, treat each other with coldness, Isolde being destined to become the bride of King Mark. The circumstances of the drama bring them together, and Isolde offers what she believes to be a poisonous draught to the hero. He, knowing its nature, agrees to drink it with her. In the face of what they believe to be approaching dissolution, the reserve of the lovers is broken down, and, folded in each other's embrace, they await death. But to the faithful maid, Brangane, has been committed a love potion to be administered to Isolde and King Mark, and this she substituted for the poison. In this age the expedient of a love philter seems childish and absurd, but in its employment we have a further proof of Wagner's deep insight into human nature. Were it but water, it would, under the circumstances, produce exactly the effects ascribed to the magic draught, for the barrier of reserve once broken down can never be renewed, and the passion avowed in the face of expected death must henceforth control the destiny of the lovers.

One of the most remarkable features of the opera is the treatment of the love potion motive, and the designs which spring from it. At times it almost seems to be omnipresent. Dramatically and musically the idea which it symbolizes underlies the whole tragedy, and is rarely lost sight of. If not actually heard, its influence is felt. Another notable point of the score is the enormously chromatic nature of the treatment. Dissonance melts into dissonance, and a perfect concord is rarely heard. The entire work contains but a single complete cadence, and that near the close of the first act. The effect is to keep before the mind the intensity, restlessness and yearning nature of the passion which the composer sought to characterize in tone.

The opera closes with Isolde's death song, or "Liebestod" (love death), her soul taking flight as she falls upon the body of her dead hero.

Though the first production of the opera took place at Munich, an attempt had been made to prepare it for the Vienna opera house, but after something like fifty rehearsals, the undertaking was given up in despair, and the work declared impossible of performance.

The singers complained that as fast as they learned one portion they forgot what had preceded, and that it was wholly unintelligible. And no wonder! Their entire education was of a nature which unfitted them for the task. A greater contrast can scarcely be imagined than that between the light melodies and oftentimes frivolous strains of Italian, French, or even the average German opera of that day, and this intense song of love, passion and death. Fortunately, in Ludwig Schnorr von Carolsfeld and his gifted wife were found, at last, for the Munich production two singers who were equal to the demands of the music, and since that time others have presented Wagner's conception to the world in an adequate manner.

Practically, it has been necessary to create a race of singers able to sing the later works of Wagner, and, further, to educate the public to a point where capacity for their comprehension began at least to exist. "*Tristan and Isolde*" is to-day as intelligible, perhaps, as many parts of "*Lohengrin*" were when it was first heard.

In none of his operas has the poet composer achieved a more perfect unity between the different parts of his work, and it may be questioned if, all things considered, it does not mark one of the highest points attained by Wagner's genius. At all events, it is unique, inimitable, yet there is scarcely a measure which does not contain something to arouse the ire and call forth the protests of old-school pedants. The very first phrase of the *Vorspiel* is a defiance of accepted canons of art. The structure of the entire work seems to set all laws at naught. But this is in appearance only; the laws ignored were founded upon a very partial and incomplete conception of tonal relationships, and Wagner has simply worked in accordance with other higher and more comprehensive rules of art. There are no set forms; the text is musically declaimed throughout, accompanied by the most intricate orchestral designs. Consequently, but two portions, the *Vorspiel* and *Liebestod*, have become familiar through performance in the concert room. Owing to the extreme difficulty of the work, it can only be successfully given at the best-equipped theatres, and this is one of the reasons why it has been long in winning its way to recognition.

The "*Meistersinger*" poem and music occupied Wagner's attention, more or less, for over twenty years, beginning as far back as the date of "*Lohengrin*." It is a comic opera, if so serious and exalted a work can justly be so denominated. Its design is to depict the struggle between the old school, represented by Beckmesser and the Mastersingers,

and the new as represented by Walther. Here, too, the leit-motive method has been followed, the salient ideas, personages and events of the drama, having each a characteristic phrase. The absurd pedantry of the Mastersingers, standing here for the older school of music, is forcibly contrasted with the freedom and romantic expressiveness of the new, as found in the songs of Walther.

One of the most striking features of this work is the profusion of counterpoint, and the apparently inexhaustible fertility with which the various motives are wrought, by its use, into ever new and interesting forms. If every creation of musical art down to the present time, save the score of the Meistersinger, were to be blotted out of existence, that score contains the materials from which almost all known musical laws, and some which are even yet unknown, might be deduced. Bach, transferred to the present age, and endowed with all the musical knowledge which has been gained since his day, would, no doubt, write counterpoint much like that of the Meistersinger. Page after page proves Wagner to have grasped the essentialities of contrapuntal writing, and developed its possibilities far beyond any of his predecessors. He shows himself to have comprehended the essence of this style of writing, adapting the polyphonic structure to his needs with a skill which belongs only to genius. Out of the mass of motives it is only possible to quote here a few of the most important. Two love themes are as follows:

(1)

(2)

Upon the first is founded "Walther's Trial Song" in the first act, in which he seeks to become a Mastersinger, while the second belongs to his "Prize Song" in act III.

Walther's own motive, characterizing him as both singer and poet, is

One of the freshest and most peaceful motives is that of St. John's Day (1), out of which nearly the whole of the accompaniment to "Poguer's

Address," is constructed, Eva, the heroine, has also a motive (2), which will be quoted in one of its simpler forms:

A discordant motive assigned to Beckmesser is the following:

Here is the "Neuremburg" motive, which plays an important part:

The "Mastersinger's March," act III, has a stirring theme, which is also used to open the overture:

Many others of almost equal interest might be quoted, did space permit. Perhaps the three most charming vocal numbers are Walther's song, "Am Stilten Herd," his prize song, "Morgenlich leuchtend," and the exquisite quintette "Selig wie die Sonne." Of the instrumental numbers, the overture and several others have long since become familiar in our concert rooms.

CHAPTER FIFTH.

WAGNER—HIS MASTER-WORKS.

STORY OF THE NIEBELUNG'S RING.

The four operas which Wagner included under this title, namely, "Rheingold," "Walkuere," "Siegfried" and "Gotterdæmmerung," occupied his attention for many years. He completed the poem as early as 1853. The following summary of it is, in part, from Mr. Burlingame's translation of Wagner's own version of it in his "Wagner's Art-Life and Theories." Where the original would take us too far for present limits, we have summarized the omitted links. Wagner begins:—

"From the womb of night and death, there sprang a race who dwelt in Nebelheim (Nebelheim the place of mists), that is, in dim subterranean chasms and caves. They were called *Niebelungen*; like worms in a dead body they swarmed in varying restless activity through the entrails of the earth. They wrought in metals, heated and purified them. Among them Alberich gained possession of the bright and beautiful gold of the Rhine—the Rheingold—drew it up out of the depths of the waters, and made from it, with great cunning and art, a ring, which gave him power over all his race, the Niebelungen.

"Thus he became their master, and forced them thenceforth to labor for him alone; and so collected the inestimable treasure of the Nibelungen, the chief jewel of which was the Tarnhem (helmet), by means of which one could assume any figure he chose, and which Alberich had compelled his own brother Reigen to forge for him. Thus equipped, Alberich strove for the mastery of the world and all that was in it. Then Wotan agreed with the giants that they should build for the gods a castle, Walhalla. But when it was done the giants demanded the treasure as the price. The gods succeeded in capturing Alberich, and in compelling him to give up the gold and finally the ring, which was the secret of his power. Alberich laid a curse upon the ring that it should prove ruin to all who should possess it. The giants took the treasure and the ring, and hid them in a cave, and put over it an enormous dragon to guard it.

"Thus an injustice had been done, and the dominion of the gods was shaken. But Wotan could not expiate the wrong without doing a

new injustice. Only a free will, independent of the gods themselves, which could take upon itself all the fault and do penance for it, had power to loose the enchantment. The gods saw the capability of such free will in man, and therefore sought every opportunity of uniting their race with his. And now mighty races of men, sprung from divine seed, bloomed into being. They steeled their strength in strife and conflict; Wotan's maidens watched over them as guardian angels. As Valkyries, they led to Walhalla those who had fallen in battle, there to continue in Wotan's companionship a glorious life of martial games. But the right hero was still unborn, in whom independent strength should come to its full consciousness, so that he should be able voluntarily, and with the penance of death before his eyes, to call that boldest deed his own. At last this hero was to be born of the race of Volsunge. Wotan blessed an unfruitful marriage of this race by giving the wedded pair an apple of Hulda to eat; twins, Siegmund and Sieglinda, brother and sister, were the product of the marriage. Siegmund took a wife, Sieglinda married a husband (Hunding); but both marriages remained unfruitful, and at length, to beget a true Volsung, the brother and sister themselves joined in wedlock. Hunding, Sieglinda's husband, discovered the crime, discarded his wife, and attacked Siegmund.

"Brunhilda, the Valkyrie, aided Siegmund against the command of Wotan, who had decreed his destruction as a punishment for his sin. Siegmund had already, under Brunhilda's protection, drawn the sword which Wotan himself had given him, and was about to deal Hunding a deadly stroke, when the god caught the blow upon his spear, against which the sword broke in two pieces. Siegmund fell. Brunhilda was punished by Wotan for her disobedience. He expelled her from the company of the Valkyries, and banished her to a barren rock, where she, the divine virgin, should be given in marriage to the man who should find her there and wake her from the sleep into which Wotan had cast her. But she begged as a boon that Wotan would surround the rock with the terrors of flame, that she might be certain that only the bravest of heroes could win her.

"The banished Sieglinde, after a long pregnancy, brought forth in the wilderness Siegfried (him who through victory should bring peace). Reigen brought up Siegfried; he taught him the arts of the smithy; told him of the death of his father, and procured for him the two pieces of the latter's broken sword, from which Siegfried, under Mime's (Reigen) direction, forged the sword Balmung, and now Mime urged the youth to the destruction of the dragon, telling him he would show his gratitude thereby. Siegfried, however, desired first to avenge the

death of his father. He sallied forth, attacked and killed Hunding, and not till then did he fulfill Mime's wish, and overcome and slay the giant dragon.

"As he put his finger, heated with the dragon's blood, into his mouth to cool it, he involuntarily tasted of the blood, and by this means suddenly acquired a knowledge of the language of the birds which were singing around him.

"They praised Siegfried's wondrous deed, pointed out to him the treasures of the Nibelungen in the dragon's cave, and warned him against Mime, who had only made use of him to gain the treasure, and who would now seek his life, in order that he might possess that treasure alone. Upon this Siegfried slew Mime and took from the treasure the ring and the helmet. He then consulted the birds again, who counseled him to win for himself Brunhilda, the most beautiful of women.

"Siegfried now again sallied forth and reached Brunhilda's rocky fortress, penetrated through the fire that raged around it and awakened Brunhilda. She joyfully recognized Siegfried, the noblest hero of the Volsung race, and yielded herself to him; he wedded her with the ring of Alberich, which he placed on her finger. When the desire seized him of sallying forth to new feats, she communicated to him, by her instructions, her secret knowledge, and warned him of the dangers of treachery and faithlessness; they swore truth to each other, and Siegfried left her.

"A second race of heroes, also of divine origin, was that of the Gibichungen on the Rhine. Among them were Gunther, and Gudrun, his sister. Gunther's mother had once been ravished by Alberich, and she bore him a natural son, Hagen, who was pale, serious and gloomy. Through his plotting against Siegfried, Alberich hoped that he would regain the treasure. So when Siegfried was come among the Gibichungen, Gudrun, inspired with love for him through Hagen's praises of his deeds, gave Siegfried a magical potion in a goblet of welcome, which caused the hero to forget Brunhilda and his life with her. Accordingly, he loved Gudrun and swore an oath of brotherhood with Gunther. Hagen had also incited Gunther to seek for Brunhilda, as the loveliest and wisest woman in the whole world. So Gunther told Siegfried of her, who immediately consented to go with him to win her. When they were come to the fire which surrounded Brunhilda's rock, Gunther's horse would not pass through, neither would Siegfried's when Gunther was on him. So Siegfried put on the magical helmet and went himself to woo Brunhilda for Gunther. As, by the loss of her maidenhood, she had

given up her supernatural power, he seized the ring from her and forced her into a room, where he slept by her side during the night, but with his sword lying between them. When he had brought her back to Gunther's ship, he stole away and gave to him the ring, after which Gunther took his place by her side. When Brunhilda reached home with Gunther, she was filled with rage at seeing Siegfried as Gudrun's husband. There was a mystery here which she could not solve. She discovered the ring upon Siegfried's finger and called upon Gunther to take it from him. When he refused to do this she accused Siegfried of having betrayed her, and called upon Gunther to slay him. Then Hagen learned from Brunhilda where was the vulnerable point in Siegfried's back, through which alone his life could be taken. So Brunhilda told him, and Hagen planned a hunt next day, during which Siegfried was to be slain by treachery.

"As he passed through the forest alone, the Rhine daughters met Siegfried and warned him of his danger. They called upon him to restore to them the ring which Alberich had taken from them, in which case the curse and the power of the ring would be forever at an end. But he refused. They told him that unless he restored the ring to the waters that he would not outlive the day. But Siegfried said: 'You shall not cheat me of my power, ye cunning women; and thus I cast life behind me,' and he took up a clod of earth and threw it backward over his head. So he went on, blind and full of pride, to the appointed meeting with his companions.

"Gunther was gloomy and silent, and Siegfried sought to cheer him, relating in songs the story of his youth, his adventure with Mime, his slaying of the dragon, and how it came about that he understood the songs of the birds. In the remembrance which this recalled to him, he suddenly recollect ed the advice the birds had given him to seek out Brunhilda; how he had gone to the flaming rock and awakened her. The remembrance grew clearer and clearer within him. Suddenly two ravens flew swiftly above his head. Hagen interrupted him: 'What do those ravens tell thee?' Siegfried sprang quickly up, and Hagen said, 'I understood them that they hasten to announce thy coming to Wotan;' with that he thrust his spear into Siegfried's back.

"Gunther, guessing by Siegfried's story the truth of his incomprehensible relations with Brunhilda, and suddenly recognizing from it Siegfried's innocence, had seized Hagen's arm to save the hero, but without being able to avert the stroke. Siegfried raised his shield to dash down Hagen with it, but his strength failed him, and he sank groaning

to the earth. Hagen had turned away, Gunther and his men gathered sympathizing and agitated about Siegfried, when he opened his eyes once more and cried :—

“‘Brunhilda! Brunhilda! thou glorious child of Wotan !
How fair and how bright thou comest to me !
Thou saddlest thy steed, smiling gravely and solemnly,
Thy steed that strides dripping with dew through the heavens.
Thou guidest his course toward me—for here there is a hero for thy choosing !
O happy I, whom thou dost cherish as thy husband !
Lead me now to Walhalla that I may drink there to the honor of all heroes,
The mead thou offerest me, thou glorious handmaid,
The mead of the Great Father !
Brunhilda ! Brunhilda ! I greet thee !’

“Thus he died. And the men raised his corpse upon his shield, and, led by Gunther, bore it away in solemn procession over the rocky heights. They set down the corpse in the hall of the Gibichungen, the court of which opened at the rear upon the banks of the Rhine. Hagen had called forth Gudrun with a shrill cry, telling her that a wild boar had slain her husband. Filled with horror, Gudrun threw herself upon Siegfried’s body. She accused the brothers of his murder, but Gunther pointed to Hagen: he was the wild boar, the murderer of the hero. And Hagen said: ‘If I have slain him, then, whom none other dared touch, what was his is my rightful booty. The ring is mine !’ Gunther stepped before him: ‘Shameless bastard ! The ring is *mine*. Brunhilda meant it for me. Hear me, all of you !’”

“Then Hagen and Gunther fought, and Gunther fell. Hagen sought to draw the ring from the body, but it raised its hand threateningly. Hagen shrank back in horror, Gudrun shrieked aloud. Then Brunhilda strode solemnly between them :—

“‘Silence your clamor, your idle rage ! Here stands his wife whom you have all betrayed ! I demand my right—for what was to happen has come to pass.’

“‘Wretch !’ cried Gudrun, ‘it was thou who wrought us ruin.’

“But Brunhilda said: ‘Silence, miserable one ! Thou wast but his mistress. I am his wife, to whom he swore faith before he had ever seen thee.’

“‘Woe is me !’ then cried Gudrun. ‘Accursed Hagen, why didst thou advise me of the draught by which I stole her husband from her ? For now I know it was but the draught that made him forget Brunhilda.’

"Then Brunhilda said :—

"Oh, he is pure !

Never were vows more truly kept than he kept them,

And Hagen has not slain him ;

No, he has but marked him out for Wotan,

To whom I am now to lead him.

• For now, I, too, have done my penance. I am pure and free
For only he, the noble one, has had me to wife.'

"Then she had a funeral pyre built upon the bank to burn Siegfried's body ; no horse, no slave, was to be sacrificed with him ; she alone would offer her body to the gods in his honor. But first she took possession of her inheritance ; the helmet should be burned with him, but the ring she herself put on.

"And she said :—

"Thou hero overbold, How thou didst hold me bound to thee.

I told thee all my knowledge, Thee, a mortal ;

And so I had to part with my own wisdom.

But thou madest no use of it, Thou trustedst to thyself alone,

And now that thou must needs give it up in death,

My knowledge comes back to me, and I know again the runes of this ring.

I know, too, the runes of the primal law, the old utterance of the Fates.

Hear, then, ye glorious gods, your wrong is expiated !

Thank him, the hero, who took your fault upon himself.

He gave it into my hand, to end the work ;

The slavery of the Nibelungen is abolished—the ring shall bind them no more.

Yet Alberich shall not receive it; he shall enslave you no longer; but he himself shall be as free as you.

For I give this ring to you, wise sisters of the watery depths.

The flame that burns me shall purify the evil treasure.

Dissolve it and keep it harmless—the Rhinegold that was stolen from you,

That slavery and wrong might be forged from it.

Thou only, Father of all, shall reign !

That thy power may be eternal, I lead him to thee.

Receive him nobly, he is worthy of it!"

"And amid solemn songs, Brunhilda mounted Siegfried's funeral pyre, Gudrun bent in bitter grief over the murdered Gunther. The flames rose above Siegfried and Brunhilda ; suddenly they streamed up in brightest lustre, and above a dark cloud of smoke arose a glory, in which Brunhilda, armed and mounted upon her steed as a Valkyrie, led Siegfried by the hand.

"At the same moment, the waves of the Rhine rose to the entrance of the hall ; the three water spirits bore away upon them the helmet and the ring. Hagen rushed madly toward them to tear the treasure from

them; but they seized him, and bore him with them to the depths below.''"

Such is the story as it was first conceived and published by the composer in advance of the composition of the operas destined for its illustration. But in working it out, Wagner made a number of deviations from it, as will appear in the fuller account of the performances of the operas at Munich, in 1884. Some of these modifications were in the direction of discarding a part of the theological implications of the argument; others, as for the purpose of lightening up the performance by a glimpse of humor, or at least of sarcasm. One of these, for example, is in the second work, "The Valkyrie," where, instead of Wotan condemning Siegmund to death as a punishment for his sin, as here stated, he is left to be overtaken by Hunding's spear, in deference solely to Fricka's command. Wotan desired to save Siegmund; Fricka insisted that he should die, as a warning to elopers—the family being her particular care. The manner of developing this in the scene is distinctly sarcastic, concerning the manner and method of what is called "henpecking."

THE LEADING MOTIVES.

No account of the Wagner operas would be complete without particular mention of the so-called "leading motives." This device of selecting a particular formula as a text of musical discourse, was not new with Wagner. On the contrary, in fugue, the transformation of a single phrase is one of the main elements of interest in the piece, as well as the chief element of its unity. In all opera, also, it has been usual to adopt one style of writing for one set of characters, and another for another. Just as the dialect changes according as it is a high-bred person who speaks or a common one, so in melody the high-bred employ a delicacy of expression unknown to the uncultivated persons in the play, and inappropriate to them. But Wagner went much farther. Then, as in "Lohengrin" he had "the motive of warning," which appears often as the suggestion of this particular moment in the drama, there was also the "Grail motive," the "Swan motive," etc., each of which was introduced at critical moments when the interests were in the process of adjustment. As relates to these four works of "The Niebelung's Ring," too much has been made of these leading motives, but it must be admitted that Wagner's theories concerning them justify most of the attention which has been paid them.

A leading motive, in Wagnerian phraseology, is a short fragment of melody, somewhat striking in its character, but, above all, not complete in itself, and susceptible of as varied transformation as possible. This

phrase stands, then, at first, as a sort of melodic formula, representing such and such phases of the action ; whenever this phase of the action comes to the front, this leading motive is heard with it, or before it. Sometimes it is heard softly, as by a few notes of the flutes ; at others it is sounded out with the full power of the orchestra. Thus, for instance, the "sword motive" in the "Valkyrie," when Siegmund is lying by the fire in Hunding's house, and thinking that upon the morrow he must fight, yet is without weapon, the fire blazes up, the handle of the sword in the ash-tree gleams, and its sparkle catches the eye of the unarmed hero. In this instance the motive is heard softly ; later, when, after a long stretch of singing, Siegmund draws the sword, the whole orchestra intones the motive with all the force of the brass and a triumphant harmony of sound. Later, in Siegfried, when the young hero is welding the sword, the same motive comes, especially when the welding is finished, and the hero has cloven the anvil with one mighty stroke. So it is with the Walhalla motive. When the gods are subject of discussion, this motive is heard now and then. So with the Valkyrie motives ; they are heard not only in connection with the gathering of the sisters, but also when Brunhilde comes on alone, and at times when the Valkyries are merely referred to. It is easy to conceive that the use of a device of this kind might easily run into an abuse or a mannerism, especially in the hands of a composer clever but conceited ; but in Wagner's hands it is used as a convenient manner of uniting widely-sundered parts of the drama, and as a manageable musical material. It also facilitates his use of them, that the greater part of them are not of conspicuously pronounced matter, but rather plastic material, which impresses itself upon the consciousness of the hearer only through repetition and thorough association with the moments of the drama which it was intended to assist in characterizing. Hence these motives occur many times, especially the less famous ones, where their presence is not noticed by the casual observer ; at other times one *feels* them rather than distinctly *hears* them ; only in a few cases are they so prominent as not to be overlooked ; in the greater number of the occasions of their use, they serve merely as available material, rather than as melodies or parts of melodies.

Hence it may be said truthfully concerning them, that the German writers have made too much of them ; as if they were something entirely new, and as if no composer besides Wagner had transformed a motive into other uses than those for which he had first designed it. Of course nothing of this is true ; motives have been transformed in a multitude of ways, ever since the arts of variation, augmentation, diminution,

inversion, and double counterpoint of the twelfth, thirteenth, etc., were invented. There is no single transformation of motive in Wagner, probably, which cannot be paralleled in the work of composers who wrote long before him. Still, the art of using these motives as the basis of the discourse, and particularly of imparting to a long and disconnected work a unity which it could not otherwise have, belongs to Wagner. The catalogue of these motives, in the little book of Hans von Wolzogen, contains about one hundred, belonging to the series of the "Niebelung's Ring," and the book itself, entirely occupied with their different manners of use, extends to more than a hundred pages of 12mo. This is carrying the matter too far. If these works of Wagner's are not to be enjoyed without the help of such an elaborate apparatus and thesaurus or glossary of melodic characterization, they are not art works, but puzzles, which the hearer is most successful in unraveling who succeeds in guessing the application of the majority of these leading and often-repeated motives upon the first hearing of the work in which they are found. Of course this is not the case; the hearer cannot possibly know of any motive whether it means one thing or another, except as he may infer it from association of ideas, through the unconscious action of memory in preserving from one part of the opera to another the impression of such and such a motive as having been heard in connection with such and such a moment of the drama. No doubt the mind might be assisted to a considerable extent in this manner; for, as shown in the chapter upon psychological relations of music, comparisons of one sense impression with another take place over wide ranges of time and association. Hence there is reason to suppose that many of these motives would be recognized by the hearer, in the same way that melodies are recognized and recalled out of an opera that pleases one, each melody associating itself with the character originally giving utterance to it. In fact, I remember that after hearing one of these operas, the principal motives would create themselves within my mind for hours after, just as the melodies of other operas would come back. Of course the elusive harmonic structure of these things of Wagner would hinder one's remembering them so definitely as to repeat them completely after one hearing. It will be necessary to await the arrival of another and a more highly gifted generation upon the scene of action, before there will be hearers sufficiently acute to do this; but such a day as this, even, is sure to come.

The following fourteen motives are the most important ones of the "Niebelung" series. Reference to them will be found all the way along in the accounts of the operas as performed.

The first in point of time, as it is in importance, is the Walhalla motive, which appears as follows:—



It is given by soft and low brass; it is a noble motive.

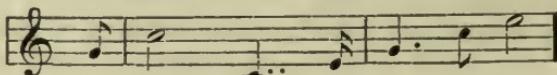
The second is the magic fire motive, the fire which Loki calls up when he wishes to accomplish any of his ends. It is high and playful, with oboes, flutes and the like.



The motive of the Niebelung's triumph is composed of a part of the Walhalla motive and a part of the Loki motive, which, except in this form, is not given in the present example:



The most remarkable motive of the first part of the trilogy is the sword motive, which is made a great deal of in the scene where Siegmund lies upon the hearth in the house of Hunding, and where the jewel in the hilt sparkles in the light of the dying embers as their rays gleam upon the bark of the great ash tree. It is the motive of the magical sword, against which nothing can stand.



All these are introduced in the "Rheingold," and are heard throughout all other operas as there is occasion for them. At times they are silent, and for long intervals. For example: The sword motive is not heard after the sword is broken by Wotan's spear, before the death of Siegmund, in the second act of the "Valkyrie," until the young Siegfried is welding its pieces, in the first act of "Siegfried." When he has completed the work the sword motive is sounded out brilliantly, as he cleaves the anvil in twain. It is the same with the Walhalla motive; for long

stretches, during which the doings of the gods are not in question, this motive is unheard; but as soon as there is mention of Wotan, or of the doings of the gods, this beautiful and suggestive succession of chords is heard again—now in one part, now in another; at times with the soft and gentle suggestion of the violas, or second violins, again with the flutes, at other times with soft notes of the horns; and, again, at other times with the full power of the brass.

One of the most pregnant and beautiful of all these figures is that of the Walsung's fate, or "heroic deeds" motive. It is this:—



The "Valkyrie" motive is of a strikingly original character; this cuts a great figure in the second opera of the series; in "Siegfried," again, it is heard when Brunhilde is awakened, and in the last opera, the "Gotterdæmerung," it comes in most impressively, near the time of Brunhilde's death. There are two of these motives: one of them (a) is the call which the Valkyrie sisters make to each other as they gather at the place of meeting; the other (b) is the motive out of which the famous "Ride of the Valkyries" is composed.

(b)

Musical notation for motive (b), showing two measures of a melodic line on a staff.

(a)

Musical notation for motive (a), showing a single melodic line on a staff.

Ho - jo - to - ho.

The musical notation shows two staves. The top staff is in common time (indicated by 'C') and has a key signature of one sharp (F#). The bottom staff is also in common time and has a key signature of one sharp (F#).

A most remarkable effect is made in the scene where Brunhilde appears to Siegmund and tells him that he is to die in the coming conflict with Hunding, by the repetition of the motive of what is called the "Question of Fate" (a), which is associated with the motive of the "Death Song of the Volsung" (b). These are the two motives of this group.

(a)

Slow.

Musical notation for motive (a), showing a single melodic line on a staff.

(b)

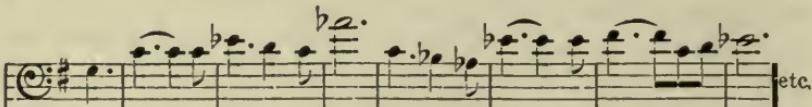
Musical notation for motive (b), showing a single melodic line on a staff.

[derived from (a).]

The musical notation shows two staves. The top staff is in common time (indicated by 'C') and has a key signature of one sharp (F#). The bottom staff is in common time and has a key signature of one sharp (F#).

The first is for soft brass, the second is for strings and occasionally for other instruments. In the account of this opera of the Valkyrie, more particular reference will be made to the wonderful effect made by this combination of motives.

In Wotan's monody, in the last act of the "Valkyrie," where he is predicting the coming of a hero brave enough to awaken the sleeping Valkyrie, there is the Siegfried motive, thus:—



The different members of this, again, are derived from various parts of the previous motives, but by derivative processes not necessary to trace in this connection, because they do not come to the recognition of the hearer as such. In other words, it is not necessary to trace the derivation of the parts of this motive, because when performed in the opera the derivation of these parts does not arise as question within the mind of the hearer, but the whole passage is received into the hearing of the listener as a complete whole. This is the case with many other parts of the work, where a minute study of the score brings to view manifold relations of design, and half-hidden allusion to other parts of the work, through the operation of motives and parts of motives so transformed from their original appearance as hardly to be recognized, and if recognized at all in the hearing, only recognized after many hearings, when the superficial aspects of the scene have, to a degree, lost their interest. The remaining chief movements of this part of the Valkyrie is the slumber motive, which is heard in the last act, in connection with the "magic fire" scene. It is this :—



In "Siegfried" there is a grand transformation of the sword motive, significant of its recovery from its former state of disuse, into which it has been thrown by the breaking touch of Wotan's spear. It is this:—



There are two or three other motives, perhaps, almost as well worthy of citing here as some of these already given, but, upon the whole, they do not come to the consciousness of the hearer with the same degree of power, and therefore we will leave them to the discovery of students of the score. They are the "Wotan's Wanderer" motive, "Siegfried," the "World Hero," and "Salvation through Love," which concludes the whole.

The student who desires to obtain the best account he can of these motives will do well to provide himself with pianoforte copies of the operas; the more difficult copies are better for this use, because they contain fuller particulars. He should also have the little manual of Mr. Von Wolzogen, already referred to. The study of these, and the hearing of the works, will presently afford all the light needed upon the treatment of these motives and the general value of this mode of effecting an organic unity between different parts of a long and highly complicated work.

The longer his study, and the higher the order of musical powers which he may bring to his task, the higher will be his appreciation of the consummate skill with which Wagner brings all these motives together in the "Gotterdæmerung," and the warmer his admiration of the grand and highly impressive effects obtained by means so novel yet, in weaker hands, so dangerous.

A ONE-ACT PRELUDE.*—PERFORMANCE OF "RHEINGOLD."

MUNICH, August, 1884.—In one of Gilbert and Sullivan's operas, I do not remember whether it is "Iolanthe" or an earlier one, the hero relates that while, in his missionary efforts, the mechanics and that sort of folk took kindly to his advice to marry heiresses, the higher classes held aloof. When I ran my eyes over the empty first and second tiers of boxes at the royal opera last night it occurred to me that from "Rheingold" also the higher classes held aloof. At 7 p. m. I did not know why, at 9.30 I did. The opera is played in one solid act—two hours and thirty minutes long. Add to this the fact of a seat in a crowded and hot box, and it will not be difficult for the thoughtful reader to comprehend why the idea of Wagner's "Rheingold" awakens in me a feeling of weariness—and this in spite of a number of interesting points.

* The experiment of incorporating in such a book as the present the full text of letters so completely journalistic in tone and style as those which I wrote from Munich to the *Chicago Daily News*, in 1884, is one upon which readers may hold different opinions. After considerable hesitation, I have decided to put them in, upon the ground that these letters, being, as they are, a record of the impressions made upon a susceptible hearer at his first hearing of these operas, and a record singularly full and frank, too, have in this fact a value justifying their preservation. Besides, to be quite frank about it, I have ventured to think that a record of this kind might even be of more use and more interest to the average reader, and especially to those who have their acquaintance with these masterworks yet to make, than more elaborate descriptions not possessing the charm due to their being a transcript of impressions which had not yet had time to fade away, or to be criticized according to the ideas of any kind of orthodoxy. In this view, I hope the fastidious reader will pardon the existence, here and there, of journalistic turns of expression not easy to eliminate without entirely rewriting the articles, and thereby sacrificing the spontaneity, which, I fancy, is their principle and only charm.—W. S. B. M.

Among these I do not reckon the prelude, for I must say, with all due respect to Wagner, that a stretch of eighty or one hundred consecutive measures upon the tonic chord is going a little too far. It gets monotonous, even when it represents the endless flow of so beautiful a river as the Rhine.

The "Rheingold" is the prelude to the remaining three days of the Niebelungen trilogy. Its office in the story is to narrate the theft of the Rheingold, and thus to prepare the way for the complications which follow, turning upon the efforts of the Rhine daughters to recover the stolen treasure. It does not appear to me that it is wholly logical to make this a mere prelude, since all the subsequent calamities turn upon the possession of the ring, and especially since the final denouement turns upon it; the ring becomes the motive of the whole, as, indeed, is plainly intimated in its giving its name to the entire series of operas. Be that as it may, we have here to do with this opera only.

The "Rheingold" opens with a scene representing the Rhine. The water fills the whole stage, even to the very top. The illusion is created by means of a gauze of a greenish color which occupies the entire opening of the stage. At first the stage is quite dark. Then the upper part of the water is illuminated; later the whole depth of it. Swimming or floating about in this water, singing and floating, are the three Rhine daughters, who sing and guard the treasures of the Rhine, which are heaped up upon a rock in the rear centre of the stage. At the bottom, and at varying heights, are rocks and cliffs in the river, and at the very bottom, in darkness at first, sits Alberic, a gnome. The Rhine daughters float and sing. They have flowing hair, blue dresses cut decollete, and beyond the end of their dresses long silver tails, curved like those of a shrimp or lobster. As they move about they motion easily with their hands. Their motion is graceful, like the swimming of a fish, who merely floats in the liquid. They sail completely around the treasure cliff, now lower, now higher, and later, in the scene with Alberic, they come quite down to the front and lower part of the depths only to pass out of sight behind a rock, after going once across the stage, and to reappear at a higher point. From my elevated seat in the highest row but one, I could see that they were supported upon vertical iron rods, which probably rested upon movable platforms below. The rods seemed to admit of elongation and shortening, like a telescope. This support was concealed from the audience, except those in the upper rows, by means of an opaque partition about midway of the depth of the stage, in the rear of which their motions took place, excepting when they appeared in front, in which case they were always low down, the supporting rod passing

along the scenic opening in the stage floor. On the whole, the scenic display in this act was very good indeed, although it still lacked the last finishing touches which would have entirely concealed the manner of accomplishing the work.

After the Rhine daughters have sung their song, Alberic, from below, calls to them and would make love to them. They will not accept of his love, but a long scene follows, in which Alberic climbs up the rocks in response to the calls of one after another of them, only to be laughed at in the end. One of them allows him to press her hand, and she fondles for a moment his shock of hair, but she only ends by deriding him, whereat Alberic is greatly enraged. The Rheingold now becomes lighted up, and the sisters sing their song in praise of it, floating about the glowing mass upon the rock high up in the water. They banter Alberic and challenge him to come up there with them. He asks if gold is good only to look at, whereupon they narrate its power and especially the power which a ring forged from it would give. One of the sisters thereupon remarks that none can gain it but he who has foresworn the delights of love. Then a great craving seizes Alberic to gain this magical power. He forsakes love, and starts up in fury to gain the prize. He seizes it and carries it away, the female sentinels having swam away when the danger became imminent. The sisters cry out and the stage becomes dark. This is the end of what should be the first act.

The stage direction for the second scene is the following: "Gradually the waves give place to clouds, which clear off in fine mist, showing an open place upon a mountain top, first by the faint light of night. The dawning day lights up with increasing lustre a castle, with glittering pinnacles, which stands upon a cliff at the back; between this and the foreground is a deep valley, through which the Rhine is supposed to flow. At one side Wotan and Fricka are lying asleep in a flowery meadow." The change of scene is accomplished by darkening the stage and lowering the front scene through the opening in the stage. At the same time gauzes are let down, rendering the back of the stage invisible. When the castle appears, "the glittering pinnacles" do not come with it. In general, however, the change was effected with reasonable smoothness. I am rather surprised that among these invisible changes the experiment has not been tried upon the principle of the painted gauze screens, which, toward the light, appear to be perfectly transparent, but from the light appear opaque. A scene of this sort could be placed in front, where it would remain invisible until the stage behind it was darkened; then by raising the light a little in front it would come out as a perfectly opaque scene, behind which a curtain could be let down and changes made. This

has been done upon a small scale in certain plays, but never, that I am aware of, upon a large one. The gods in "Rheingold" are a sad lot. Wotan is represented as an old man with one eye gone, long, shaggy hair and whiskers—a pretty tough old customer, whose sinister appearance is not enhanced by the rakish slant of his hat-brim which conceals the missing eye. Fricka has a few gray hairs, as a woman with such a husband is apt to have, but her clothes are fresh and fine. As Fricka arouses Wotan, he is dreaming of the fine castle which he has ordered the giants to build for him. He awakes to find it done, and sings a fine song in appreciation of it. But Fricka recalls to his mind that the finishing of the house only hastens the time when the price must be paid, which price was to be the favorite goddess of all, Freia, whom one of the master giants desires for wife. Freia comes appealing for help, for Fasolt, the amorous giant, has called to her that he is coming for his pay. Wotan, longs for Loki, the Mercury of this Olympus, on whom he depends for cunning tricks and deceitful wiles to get himself out of scrapes. The giants come in and report that the house is done, and that Wotan is welcome to enter as soon as he has paid them their wage. Wotan has forgotten the pledge, but the giants soon recall it to his mind; he seeks to cajole them with the idea that a handsome young woman of superior habits and expensive tastes would be of no use to them, but Fasolt is not to be diverted from his purpose. Wotan temporizes. At length Loki appears. He is the god of fire. He has frowsy red hair and whiskers, a brick-red suit, and scarlet mantle. It is Vogl, the great tenor. He is admirably light in the part, making it a sort of mythological Figaro. Wotan turns to him, and calls for his scheme. Loki then has a long scene in which he recounts how that he had "stormily strode to the ends of the earth" seeking for a substitute for Freia that would be just to the giants, for he had examined the giants' work, and found it sound and good. He says :—

Where life ebbeth and floweth, in flood, and earth, and air,
All asked I, ever inquiring where sinew doth reign and seedlings are rooted.
What well a man could, mightier deem
Than woman's wonderful worth.
But where life ebbeth and floweth,
I only found myself laughed at by all,
In flood, and earth, and air.
Everything hath for aim but love.

Yet one he met with who had forsworn love, Alberic, by which means he had gained wondrous power. As soon as the name of Alberic and the Rheingold is mentioned Fasolt begins to ponder, for Alberic is

an old enemy of his. Loki casually mentions that he had promised the Rhine daughters to report their sad case to Wotan, who replies that he is himself in so bad a fix just at present that he is no help for anybody else. Loki proposes that Wotan should rob Alberic of this treasure, and the giants at the same time declare that the Rheingold would be of more use to them than Freia. Fafnir, the other giant, is the stronger in this opinion because Freia was to be the wife of his brother, his own share of the wage for the castle building being purely of a platonic and sentimental kind. The scene ends by the giants carrying off Freia as hostage until morning, and Wotan and Loki slipping down a sulphurous chimney in the corner, in pursuit of the nether regions and the ill-gotten gold of Alberic.

The third scene is laid in the underground cave of Alberic, ruddy with the glow of firelight. In the corner is a forge, and before the mist in front is lifted the noise of hammering is heard, as Mimi hammers upon the magical ring and the helmet which he is forging for Alberic. The change is effected by bringing up the scene from below. When the mist clears away, Mimi is seen dragged in by the ear by Alberic, who threatens him for not having finished the magic helmet. Mimi produces it and Alberic tries it on; immediately when he has repeated the magical rhyme he disappears behind a cloud of steam let up from below. He then flogs Mimi while he still remains invisible. Wotan and Loki come down and Mimi explains the situation to them. They await Alberic's return. Presently he is heard coming, preceded by a crowd of Niebelungen, who pile up the golden ornaments before him. He then presses the magical ring, and with a cry they disappear. He discovers Loki and Wotan. Loki draws him out and induces him to give them an example of the magical helmet's working. He puts it on and changes himself to the form of a dragon—a stage dragon, of which Loki is not at all afraid. When Alberic reappears Loki appears to be in mortal terror, and asks whether he can also make himself smaller. Alberic replies that he can, and thereupon changes himself into a toad. Loki sets foot on the toad, and, tearing the helmet off his head, they produce Alberic tightly bound. The scene ends with the disappearance of Wotan and Loki, with the bound Alberic, up the sulphurous chimney upon the left. In this account I overlooked the display of his intentions which Alberic made in the scene with Wotan before the test of the helmet. He proposed to control all the world and even the gods themselves by means of gold, the helmet, and the ring. This display was put in for the purpose of furnishing a poetic justification of Wotan's robbery of the ring, which takes place in the next act.

The scene then sinks as before and the home of the gods reappears, but cold and pale and gray. The life-giving apples of Freia are not forthcoming, for she is yet in pawn with the giants. Enter Wotan, Loki and Alberic. Then follows a long and powerful scene. Alberic is told that for his liberty he must give up the Rheingold. He reflects that with the ring and the helmet the loss of the gold does not signify, as the Niebelungs can soon forge him other treasures. He touches the ring with his lips and summons his minions. They come and pile up the glittering stone, after which they slink timidly back. Alberic then prays for his liberty, asking first that the helmet, which Loki holds, be restored to him. Loki answers that this also goes with the store. Alberic, aside, remarks that he can easily make another. He asks his freedom, but Wotan calls for the ring upon his finger, which, being refused, he tears off by force. Then they release Alberic, who no sooner is free than he rebukes Wotan, and lays a curse upon the ring and upon the gold. The curse is good, containing, like many other parts of this opera, a hidden meaning. "No man shall own it mirth, it shall gladden no life, care shall consume its possessor, and envy him who neareth it not. To the master giving no gain, the murderous brand it shall bring." Exit Alberic. The giants now come in with Freia. The gold is piled up and Wotan bids them take it and depart. But the giants know a thing or two in their way, and they will also have the helmet and the ring. Wotan stands long for the ring, but at length he gives o'er. No sooner is the gold to be divided than the giants quarrel as to the division of it, and Fafnir kills the other, after which he packs up all the gold and the ring and takes himself off. Meanwhile the castle at the back has remained hidden by mist during this scene. Donner now resolves to clear it away. He ascends a cliff, and presently his hammer stroke is heard in the clouds, a vivid flash of lightning is followed by a deafening thunder. Donner and Frok have raised a rainbow, over which, the clouds having cleared away, the gods go into Walhalla. Thus ends the opera.

The music of the "Rheingold" is by no means so strong as that of other operas in this series. In the whole of it there is not a melodious number, and there are no developed music-pieces, such as the "Ride of the Valkyries," the "Waldweben," the "Siegfried's Funeral March," which relieve the endless declamation of the other operas in the series. It will be seen that there is a total absence of the ordinary society motives in the dramatic movement, and an absence also of everything which could answer to them. Still, it would be a mistake to infer from this that the opera lacks power. On the contrary, although the beginning is tedious, and many scenes appear longer than need be, the interest grows to the

very end. It is like a fairy story told to grown-up folks. If I had been able to follow the German words as spoken upon the stage, I would have found it still more interesting.

"Rheingold" is also an experiment in the direction of increasing the dramatic unity by dispensing with the customary waits. Wagner had once before tried this in the "The Flying Dutchman," only with the result of affording ordinary managers license to cut off the play at any point they happen to fancy. This experiment is a decided failure and can never be anything else. To sit for two hours and a half of continuous discourse from any speaker, and particularly from one so sombre and so highly intellectual as Wagner, is what can never succeed. No possible contrast and no degree of magical interest can compensate for the necessity of sitting still in a hot and close atmosphere for two hours and a half at a stretch. Still, I suppose we ought to be thankful that Wagner's evil genius did not lead him to make it an hour longer.

The "Rheingold" is also an experiment which is related to "Parsifal" in the matter of effecting scenic changes without the clumsy expedient of sliding scenes in plain sight of the audience. In the "Rheingold" the scenes sink and rise vertically; in the "Parsifal" they move laterally, and imperceptibly glide into each other. No doubt Wagner justified the two ways upon the theory that the worlds of "Rheingold" were over each other, while in "Parsifal" all the movement takes place upon the earth's surface. However, I have only to do with the effect, and with regard to this, say, without hesitation, that the "Parsifal" way is far the better of the two. The effect of the sinking and rising is not good. The illusion is not improved by it.

RENDERING OF "THE VALKYRIE."

MUNICH, Bavaria, Aug. 28th.—The opera last night was the weird and strangely beautiful creation, "The Valkyrie." The profession of a valkyrie seems not to be well understood, even in circles otherwise well informed. The valkyries were daughters of Wotan, by Erda. They were war maidens, whose office it was to appear to heroes who were to be slain in battle, and to bring them to Walhalla—not their dead bodies, as is often asserted on programmes, and as is implied by the English translators of the libretto, who, in one place, have rendered the name "corse-chooser." It is plain, from the dialogue between Wotan and Brunhilde, in the third act of this opera, that it was living heroes whose presence was desired in Walhalla, and not the dead ones. "The Valkyrie" begins the development of the history of that remarkable hero, Siegfried. I use the term "begins" advisedly. According to the somewhat artifi-

cial theology of this work, Wotan, having once stolen the ring of the Rheingold, and having fallen under its curse, could only be released through the mediation of some other intelligence, who, perfectly free and entirely unmoved or uninfluenced by Wotan, should himself acquire the ring, and thus take upon himself the curse, and should restore it afterward to the Rhine daughters. This I gather from Wotan's speech to Brunhilde. The obvious course of stealing the ring again from Fafnir, and himself restoring it to the owners, does not seem to have occurred to the rather rakish old divinity. The principle personages in the "*Valkyrie*" are Hunding, a coarse hunter, the chief of a clan, and the husband of Sieglinde, who has been forced to marry him; Siegmund, twin brother of Sieglinde, both children of Wotan by an earthly woman, but separated in infancy and unknown to each other; Wotan, the god, head of a numerous and extremely complicated family; Fricka, his wife, who has her opinion of his goings on; Brunhilde, the favorite valkyrie, the heroine of this opera, and one of the nine valkyrie sisters. There is no chorus, the valkyrie semi-chorus at the beginning of the third act being the nearest approach thereto. The vocal disposition is as follows: Wotan, bass; Hunding, bass; Siegmund, tenor; Fricka and Brunhilde, soprano; Sieglinde, soprano.

The opera opens with a wild prelude, the most peculiar feature of which is the long pedal-point on D, with a moving figure in unison against it. Later, this gives place to an orchestral thunder-storm of Wagnerian potency. When the curtain goes up it reveals Hunding's home—in the centre of the stage a great ash tree, its roots widespread, the branches passing out through the roof of the house. Upon the right a raised hearth, like a blacksmith's forge, with a little fire upon it, and by the side of it a few skins for a couch. Upon the left a table and three stools. Behind it, leading to a door upon the left, a flight of four or five steps. The large door of the house opens at the rear. The stage is dark and the storm is raging. The door opens just enough to admit Siegmund, who, having closed it, staggers across to the couch by the fire, where he falls insensible, with his face toward the prompt-box. Next enters Sieglinde, a buxom and well-favored person, who comes forward and asks who it is that has entered her house. She discovers the stranger, who revives enough to ask for a drink, whereupon she quickly takes a drinking-horn and goes out after water, which when he has drank he is much revived. Both are much struck with each other. They gaze at each other long and intently, like Senta and the Flying Dutchman, while the orchestra interprets their unspoken sentiments. Siegmund then gives an account of himself, saying that he had been sorely pursued by foes and

had wandered far. He is unarmed, which looks as if the foes must, indeed, have pushed him hard. Now enters Hunding, a tall, stern man, in heavy black whiskers. Operatic villainy is always sung in bass or contralto, and performed by men in black whiskers. Fancy the miserable life of a thoroughly good fellow, the unfortunate owner of a fine bass voice, condemned to go through his career as a sort of almanac of villains, the detested of the gallery and the inevitable victim of the poetic justice of every writer! Hunding comes in, stands silent at the door for some time, then comes forward and sees the stranger, whom he makes welcome in his rude way, according to the laws of hospitality. When he looks at Siegmund he is struck with the resemblance between him and his wife—a resemblance, I am bound to say, which did not strike me ; he notes “the same gleam of a snake in their eyes ;” he notes also their admiration for each other, and is obliged to make some very significant signs to Sieglinde in order to hurry up the supper. They seat themselves at the table, and here comes in a solecism of the performance. Hunding sits in the rear, facing the audience ; upon his left Sieglinde, upon his right Siegmund. The table is round, and during the eating scene Siegmund has to do most of the singing, which he does with his face to the audience and his back to Hunding, whom he is mostly addressing. I do not know whether this arrangement was the result of the self-will of a favorite tenor, or the carelessness of the stage manager, anyway, it was a solecism. When they have begun to eat, Siegmund gives an account of himself, concealing his real name, but from the story it finally appears that he is the very enemy whom Hunding has been all day pursuing in order to revenge some evil done a kinsman of his. He rises moodily from the table, orders his wife to prepare his sleeping draught, and then tells Siegmund that for to-night he is safe, but that in the morning he dies. Recommending him to provide himself with good weapons, Hunding retires, taking with him his own weapons. Siegmund throws himself down upon the couch and muses ; the fire flashes up brightly a few times and the handle of a sword gleams out of the ash tree as the “sword motive” rings out in the orchestra. It is Wotan’s sword, which he stuck in the stem of the ash tree, to be drawn only by the coming hero, the Volsung’s son. The fire dies down. The door opens and Sieglinde enters. She calls upon Siegmund to fly, for her husband is sleeping under the effects of a drug. They gaze upon each other in warmer and warmer admiration, and at length come to love-making in earnest. The great door bursts open, startling them for a moment, as such things will ; but it lets in a flood of moonlight, under which the love-making becomes more and more impassioned. The secret interview gives place to the most fervid

declamation and impassioned song. Hunding sleeps through it all, and so do the neighbors. The lovers recognize each other for twin brother and sister, and Sieglinde proposes to elope with him as his wife. It is arranged. She then calls his attention to the sword, and, after a splendid burst of song, with a mighty effort he draws it from its hiding place, amid the crash of the orchestra and the triumphant pealing of the sword motive from the trumpets. Sieglinde sinks upon his breast with a cry—"Quick, curtain." During all this there has not been a single aria, recognizable as such, but I am bound to say that the music has been far from unenjoyable. The musical declamation is fine and not in the arioso style of "Parsifal" and "Lohengrin." The purely didactic and explanatory passages are meagrely accompanied, not with the 'cellos alone, as in Italian opera, but with 'cellos and violas and a horn or two, a light and unobtrusive accompaniment. Only in a few places in the entire hour and a quarter of this act is the full power of the orchestra used. Moreover, the element of rhythm plays an important part. The leading motives are of a more melodious character than most of those which Wagner has used, and in many places in this act they are developed into rhymic symmetries and sequences, which are at once caught by the audience. Thus, without the usual elements of operatic sensation, Wagner has found ways of producing here interesting and even popular effects.

The next thing upon the programme is the fight between Hunding and Siegmund, but the second act opens with a scene upon a wild and rocky pass. In the rear, mountains and lofty peaks so placed as to show that the scene also is upon a peak. Leading from the right middle entrance is a practicable bridge, like a ledge of rocks, leading to a lofty ledge upon the left, and so down to the front. In front, Wotan in warlike array, in which he looks much more respectable—just as almost anybody does in professional dress rather in the rough-and-ready suits of vacation. Wotan calls to Brunhilde, who here makes her first appearance, answering from peak to peak, and at length coming down to the front. Wotan directs her to shelter Siegmund in the coming fight. Brunhilde goes off in glee, for the task is much to her liking. But as she goes out she throws a veil of sadness over the meeting by informing Wotan that there is trouble ahead, the ram-drawn car of Fricka being close at hand. Here enters Fricka in a car drawn by two "property rams," so very clumsy that they couldn't possibly have deceived even our first mother. Fricka comes in, and a henpecking scene follows, so curiously true to life as to be in the last degree unpoetic and uninspiring. After going over the catalogue of his misdeeds, according to the style of the late Mrs. Caudle, Fricka completely crows the rather slippery god, and obliges him to recall Brunhilde and counter-

mand his orders with regard to Siegmund. Fricka covers the whole ground in the argument, and a majority of married women would give her their full sympathy. Wotan is completely crushed. He falls upon a flat rock in despair, and even wishes that he were dead. Brunhilde remarks that she never saw him so used up before. Then follows a long scene between Wotan and Brunhilde, in which Wotan explains the curse of the ring and the dreadful dilemma he is in. Brunhilde is much disgusted at the turn things have taken, and at her changed orders; but upon her venturing something of the sort, the god quells her at once. Then she goes out. I forgot to say that when she enters she comes leading her chestnut mare, Grani, over the high bridge and down the passage to the front, occasionally getting her white train stepped upon by the careless beast.

The mare is used to public appearances, and munches the lumps of sugar, which Brunhilde gives her occasionally upon the sly, like any other good young person. This intelligent and ladylike beast is uniformly spoken of in the poem in the old-fashioned way as "he." Wotan strides off up the pass and over the bridge, threatening Brunhilde occasionally by a gesture. After he is gone, Sieglinde and Siegmund appear, climbing up the mountain, and Brunhilde disappears. Sieglinde is tired, although her long white dress shows no traces of fatigue nor of its nocturnal journey through the forest. With woman's caprice, she shudders and draws away from Siegmund, not because she has married her own twin brother, but because she had previously suffered herself to be the unloving bride of Hunding. At length she stops, resting her head upon Siegmund's knee, who remains seated upon the rock throughout this and the following scene. Now enters Brunhilde, leading her steed; she looks long and silently at Siegmund. Then she speaks:—

" Siegmund, see'st thou me.
I come to call thee hence."

The music is soft and weird—wonderful music. It is the "fate motive," as given in example 7. Later, she explains that those who see her face must die. Siegmund asks if in Walhalla he shall find Wotan alone. She answers no; many heroes are there.

" Fareth in Walhall', Volsung, my noble father?"

" Thy father findest thou, Volsung, there."

" Shall I in Walhall' welcome a wife?"

" Wish-maidens wait on thee there. Wotan's daughter faithfully deal thee the drink."

" High thou art and holy; I ween thou art Wotan's child. Yet one thing tell me truly: Shall there Siegmund Sieglinde find?"

" Lone on earth must she still linger; Sieglinde will see Siegmund no more."

" Then greet for me Walhall' and greet for me Wotan; greet for me Volsung and all the heroes; greet, too, the high-born wish-maidens. To them I'll follow thee not."

Brunhilde continues that he must come; that he has seen her, and he cannot live. She tells him that Wotan will break the sword, and that he will fall by the hand of Hunding. Then Siegmund bursts into a torrent of woe. He repudiates Wotan, who will play such a trick upon him; he repudiates Walhalla, and declares that to Hella he would much rather go. Touched by his distress and the evident hardness of so sudden a breaking off of the honeymoon, Brunhilde promises to do the best she can for him, and at least to protect Sieglinde. Then she disappears.

The stage darkens. Sieglinde has awakened, and hears Hunding's horn in the distance. The bridge is obscured by a cloud. Siegmund rushes up the steep and is lost to view. They fight. The cloud opens to show Brunhilde defending Siegmund, and again at the moment when Hunding is withdrawing his sword from the slain Siegmund. In the background, glowing under a soft, red light, stands Wotan, whose spear has shattered Siegmund's sword. As Hunding turns to go away, he falls dead at a wave of Wotan's hand, who tells him to go and report to Fricka that he has kept his word. Then falls the curtain.

The great charm of this act is the strange, weird music of the scene between Brunhilde and Siegmund. I have never witnessed a more impressive scene upon the stage. The association of the supernatural with fixed fate and human life with which we begin to sympathize, is accomplished here with wonderful power. From every point of view the scene is exquisite.

The third act is introduced by the famous "Ride of the Valkyries." As it goes on, the Valkyries are seen flying upon horseback through the air; they arrive one after another and gather upon a high rock in the rear right of the stage. Here they sing their strange chorus. Last of all comes Brunhilde with Sieglinde. Brunhilde calls upon her sisters to aid the desolate woman, who does not seem to have thought of the obvious course of going back home and enjoying her mourning as Hunding's widow, claiming that it was all a mistake to say that she had gone off with Siegfried; that she had only been away to one of the neighbor's, whither she had been urgently summoned. The Valkyries fear Wotan's wrath. His voice is heard calling for Brunhilde, and the red light of his presence glows in the forest. Sieglinde takes the broken sword, which Brunhilde has carefully saved for her, and treasures it for the unborn hero, the fruit of her union with Siegmund. She flies to the distant forest. Meanwhile, Brunhilde hides among her sisters, only to be called forth and condemned by Wotan. The Valkyries fly away, and then follows the long third scene, most of which Scaria and Materna gave in Chicago, and the whole of the music of which Mr. Thomas has often played there: "Brunhilde's

Sentence," "Wotan's Farewell to Brunhilde," and "The Magic Fire Scene." Coming thus naturally at the end of the story, it forms a finale of singular impressiveness and beauty. In this part of the work I had an advantage which I did not possess in the others, that, namely, of knowing the German words. I could not but be struck with the beauty of the declamation, the suitableness of the music to the words and to the feelings involved in them. Besides, here, as all through the opera, I noticed how the action and the scene served to relieve the sense of tedium which can hardly be avoided in hearing the music by itself in the concert-room. This long act does not drag, but moves steadily to a most beautiful and noble climax.

I also had a better opportunity of judging of the playing of the orchestra, from having heard so much of this music many times before, and I must say that it was not nearly so refined and artistic as I had hoped to find it. The phrasing was often at fault, and the shading was not delicate enough, besides which—or, rather, through which—the well-sounding was often wanting where Wagner had amply provided for its presence. Vogl, as Siegmund, showed the effect of previous hard work, but he was excellent throughout the evening. The ladies—Frau Vogl, as Brunhilde, and Frau Weckerlin, as Sieglinde—were both passé as to voice, tremulous and breathy to a degree which greatly impaired the effect of their good acting and their excellent declamation. Herr Gura, as Wotan, and Kinderman, as Hunding, were fairly good.

NOTE.—Owing to the accident of Vogl, the tenor, becoming utterly tired out by the strain of giving the entire Niebelungen Ring twice in succession, the opera of Siegfried had to be omitted upon this occasion at Munich. Consequently, I am obliged to make up this from my notes of another hearing, never before written out.

W. S. B. M.

SIEGFRIED.

I suppose that the opera of "Siegfried" is generally regarded as inferior to the other parts of the Trilogy, at least in the element of human interest. It opens with a gloomy cave, or smithery, in the forest, where the gnome Mimi has his rude habitation. It is he who has taken Siegfried from his dying mother, Sieglinde, together with the broken pieces of the sword "Nothung," and it is he who has cared for the growing boy, knowing that it is he who eventually will be able to overcome the dragon, Fafnir, and take to himself the fabulous treasures of the Rheingold. The boy has known no other father, no mother; no other human face has he beheld than that of the deformed and stunted Mimi, yet, as appears later in the story of Siegfried, he has decided, of his own reflection, that he cannot be the son of Mimi, and that somewhere or other he must

have had a father and a mother, and that to these unknown parents he would owe a duty and a love which he never feels toward Mimi, for whom, on the contrary, he feels nothing but loathing and contempt. Already the boy suspects the cowardice of Mimi, and delights to try rude tricks upon him. It is in such a trick that he makes his first entrance upon the scene. He comes driving before him a large bear, whom he has caught and compelled to accompany him. Mimi, in affright, conceals himself under the anvil; Siegfried calls him out, and, after bantering him for a moment, he dismisses the bear to his home in the forest.

Siegfried calls Mimi to account. Has he finished the sword, long promised, with which the hero will slay the dragon? Many and oftentimes has the miserable smith endeavored to fashion such a weapon, but at the first stroke the powerful hero has broken it to pieces upon the anvil. It is so upon the present occasion. At one blow the sword flies into a hundred fragments. Siegfried is angry; he reviles his foster father, and gives rein to all the malice and contempt he feels for him. Yet he will not leave Mimi, for he feels within him that the story of his mother is something which he ought to know, and something which none but Mimi can tell him. Again he approaches the topic, and this time he succeeds in bringing Mimi to the narration. He tells Siegfried how he received him of his suffering mother, along with the pieces of the sword, and that of his father he knows nothing. Then he brings out the pieces of the sword, and Siegfried demands that Mimi weld them into a weapon, for it is this sword he is sure he must use if he would slay the dragon.

Wotan, disguised as the wanderer, enters the smithery where Mimi is laboring at the weapon for the ungrateful and capricious boy. Something in his aspect strikes the dwarf with dismay. He refuses him shelter, but Wotan is not to be resisted. He declares that his knowledge is great, and that many have learned of him, and have been delighted with his learning. Three riddles he is willing to try with Mimi, the head of the loser to be forfeit to the other. In desperation, Mimi asks him what race it is that dwells in the bowels of the earth. Wotan is ready with his answer almost before the question is completed. He answers, The Niebelungen dwell in the bowels of the earth. Then asks Mimi, Who is the race that dwell upon the earth's surface. To this also Wotan is ready with his answer: It is the giants, he declares, who dwell upon the earth's surface, and who acquired the gold of the Rhine. Mimi is trembling now, but a third question he must ask; it is in regard to the dwellers of the upper air. In the *Æther* above, says Wotan, "dwell the *Æsir* in Walhalla; like elves of heaven, Wotan wardeth their host. Wotan sways the world. Holiest treaties he wrote all around the shaft of

his spear. The head of worlds, he, by whose hands is the head of the spear gripped that Wotan's grasp now spans. There kneels to him the Nieblung host ; the giants must bow, by him enjoined ; all must allegiance owe him, the spear's resistless Lord." He rests his spear upon the ground, as if accidentally ; a slight peal of thunder is heard. Mimi is terrified. Then Wotan declares that, although he has forbore to ask him the one thing nearest his heart, and the thing which Wotan alone can tell him, he will, nevertheless, give him the information. The broken sword can never be mended but by one who has never known fear. Then Wotan vanishes.

When Siegfried comes back, Mimi uses every effort to induce him to confess to having known, at some time or other, the sentiment of fear. But nothing of this does Siegfried confess ; on the contrary, the further the questioning goes, the plainer it becomes that he has never known what fear is. After all tests are made, it grows upon Mimi that this is he who alone can weld anew the broken weapon. Siegfried takes the pieces, and, having fastened them in a vice, proceeds to file them to atoms. When all is done, to Mimi's wonder, he puts the fragments in a crucible, and, having replenished the fire and blown it to a great flame, he proceeds to melt the steel, and presently to hammer and fashion and file it into shape. And as he works, he sings the one great song of this part of the opera. It is a famous sword song. While it goes on, the orchestra is busy with many of the old motives of the Volsungs, and, most of all, with the sword motive. It is a wonderful song, like nothing else that one can hear anywhere. There is a rude refrain. It goes :—

"Oho ! Oho !
Aha ! Aha !
Bellows blow,
Brighten the glow !—
Needful ! Needful !
Notable sword,
I've melted thy steely shreds.
In thine own sweat
Thou swimmest now :—
I soon shall call thee my sword."

When the song is all ended, and when the weapon is once more shining and fashioned to his liking, he gives one mighty stroke with it upon the anvil, which he cleaves from top to bottom, so that it falls apart in two pieces. He goes out into the forest flourishing the sword. Here ends the first act.

The second act is equally barren of incident. It takes place in the

forest, at the cave where the "worm" guards the Rhine gold. Near the entrance is Alberic, lurking and studying how he can once more acquire the treasures which Wotan robbed him of, through Loki's trick. Here comes Wotan, between whom and Alberic their ensues a long dialogue, as barren as a theological discussion or a curtain lecture. At the end, Alberic calls aloud to Fafnir, that a hero comes who would take from his keeping the treasure. Fafnir turns him in his sleep, and murmurs, "For him I starve."

At dawn of day Mimi and Siegfried enter. Mimi has brought him to learn a lesson in fearing. After considerable dialogue, almost puerile in character, between Siegfried and Mimi, the latter departs, leaving Siegfried to fight the dragon alone, if he muster up courage. He, in turn, meditates upon his father, whom he is quite sure must have been quite other than Mimi, perhaps—indeed, most likely—as he is himself. He thinks of his mother; he would see her. Do all earth mothers, he wonders, die of their children? He tries to picture her, with tender eye, like that of a gazelle. He reclines upon the bank, and as he does so, the song of a bird in the tree attracts his attention. "Thou pretty warbler," he says, "thy strain, could I understand it, might utter to me, belike, of my loving mother." He cuts himself a reed, and with it makes a pipe, on which he essays to imitate the song of the birds, hoping that in this way their meaning may come to him. It is in vain. He throws the reed away, and winds a note upon his hunting horn. A noise is heard in the background, and Fafnir, awakened by the sound, rises from his lair. He is a dragon, half lizard in form. He is the failure of the opera; for cost so much as ever he may, he can never be made to work with verisimilitude. Still, he comes, and the battle takes place, only to end in the death of the worm and the triumph of Siegfried, who thus is left master of the treasure. He happens to touch his finger to his lips after having wiped his sword of the dragon's blood. The bird sings again, and, behold, he can understand what it is that the little songster would tell him. It is, that he must beware of Mimi, who would slay him, and that upon a distant rock a maiden lies slumbering under her shield, to be the property of him who is bold enough to break through the fire and awaken her. The birds tell him to slay Mimi, which he straightway does. He then rushes off after the sleeping maiden. Here ends the second act, the principal pieces of music in it being the famous instrumental piece, "Waldweben," or Forest Weavings, or, as Mr. Thomas prints it, Forest Murmurs. It is a wonderful piece, of which one is at loss whether to call it realistic or idealistic. For, while from one point of view the formlessness of this piece, and its mixture of sounds, its con-

tinous murmuring, and its mystery, are like nothing but a great forest, it is, nevertheless, true that no forest ever produced these sounds. It is a highly poetic reproduction, upon an impressionist principle, of the effect of a great forest. The piece contains not only the sounds of the forest and the bird voices, but also the great undertone of sadness which a forest impresses upon the poetic spirit.

The third act opens with an interview between Wotan and Erda, the witch-wife who bore Brunhilde to him. Wotan summons her from the deep, as the witch summoned the spirit of Samuel at the command of Saul. Erda declares that in Brunhilde's sleep her wisdom also sleeps. After considerable conference of a very theological and inconclusive kind, she vanishes ; the stage becomes dark, and at the back Wotan awaits the coming of Siegfried. He advances boldly ; Wotan stops his way. There is more dialogue here, all tending to bring out the fearless character of Siegfried, and at the end Wotan puts out his spear to stop Siegfried's passage toward the sleeping maiden, when Siegfried, with a mighty blow, shatters it into fragments. Wotan then departs discomfited, and Siegfried goes on his way. Siegfried winds his horn and plunges into the fire, blowing his call. The fire now flows over the whole foreground. Siegfried's horn is heard, first near, then more distant. The fiery clouds continue to pour from the back toward the front, so that Siegfried, whose horn is again heard nearer, appears to be ascending the mountain. At last the glow appears to fade, and sinks to a fine transparent veil, which also clears off and reveals the most lovely blue sky and bright weather. The scene, from which all vapors have fled, represents the rocky summit of a mountain peak, the same as in the last act of *The Valkyrie*. To the left, the entrance to a natural hall of rock ; at the right, spreading fir trees. The background quite open. In the foreground, beneath the shade of a spreading fir tree, lies Brunhilde, in deep sleep ; she is in a complete suit of gleaming plate armor, as she was in the former opera. Her helmet is on, and her long Valkyrie shield covers her body. Siegfried has now reached the rocky heights in the background. His horn has sounded more and more distant, until it has ceased altogether. He looks around in astonishment. He discovers the sleeping Brunhilde, removes her shield and helmet, and after gazing long at her, the first woman he has ever seen, with a lingering kiss upon the lips, he awakens her to life and to love. From this point to the end of the opera it is a duet of love. The music goes with the words, and is, at times, throbbing, tumultuous, irresistible. At first Brunhilde is frightened at the idea of giving herself up to Siegfried, although she knows that he is the lord destined for her. By degrees, she gains courage, and at the last there is a mighty burst of song, as she throws herself into his arms, and the curtain falls.

The music of this opera is interesting, but it does not carry one away as does that of the Valkyrie. Throughout the whole opera there are only three well-defined numbers which leave a distinct impression upon the ordinary hearer. Of course, it goes without saying, that all along there are motives, and suggestions of the previous themes, as well as certain new ones, appearing here for the first time. But upon the whole, the opera is so barren of dramatic movement as to be rather deficient in interest. The three pieces of music which stand out are the sword song in the first act, the Forest Murmurs in the second, and the great love duet in the last. There is no chorus, and there are rarely or never more than two persons upon the stage at once. Consequently, there are no ensembles, and there is no by-play. It is all monologue except the duet at the close. If I remember correctly, there is nowhere in the whole opera that two persons sing at the same time, but in the very last scene, where Brunhilde and Siegfried sing their love in unison, just before the curtain falls. "Siegfried" is a work of art which, above all others, requires to have its standpoint conceded. That is to say, if one attends the representation of it in the spirit in which one ordinarily goes to the opera, namely, to be amused, or to hear pleasing pieces of music sweetly warbled by brilliantly appareled women and handsome men, he will be disappointed. There is no woman until the sleeping Brunhilde is awakened in the last act. She is the only woman in the entire representation. There is not even a ballet of gnomes or elves to relieve the monotony. It is impossible to conceive that this opera can ever become popular, in the sense in which "The Valkyrie" is popular, or even the different sense in which the conclusion of the Trilogy is popular—as a commanding display of the composer's genius. Nor has it anything new from a scenic standpoint. Its fire display has been anticipated in the "Valkyrie," and the forest and cave of hate hardly offer anything that can be called novel. Even the dragon is a stage dragon. The opera of "Siegfried" serves its place in continuing the story. It was a mistake of the author to allow it so little of incident. This was the error of the division of the story, in the first place. When Wagner had discovered it, if he did discover it, it was too late to remedy it, for the "Valkyrie" had been composed and the "Götterdämmerung" had been sketched.

THE "GÖTTERDÄMMERUNG" AT MUNICH.

Special to the *Chicago Daily News*.

MUNICH, Bavaria, Aug. 30th.—Nothing that I can write will give an adequate idea of my overwhelming admiration for Wagner's genius. Many points in it I had come to realize before. When you have heard Theo-

dore Thomas play the Wagner selections, and have fully taken them in, there is nothing more to be learned of the orchestral part of those wonderful tone creations. As I have elsewhere said, and I must say again, and, as Mark Twain says, "say it slowly," no composer has ever lived who influenced phraseology more than Wagner. He introduced, invented if you chose, or discovered new ways of making chords follow each other which not only have commended themselves to all hearers as genuine and true, but have influenced our harmonic perceptions to such an extent that every gifted young composer disregards his schoolmaster's injunctions and writes "in the Wagner style." To mention one of the side consequences of this move, Wagner and Sebastian Bach have rendered the tempered scale necessary and permanent, so far as this generation and the next are concerned. My first impression of the "Parsifal" prelude, when Dr. Damrosch played it, was that it was fragmentary. My present impression is in part the same, yet the piece is thoroughly symbolic. But nobody can call the "Lohengrin" prelude fragmentary, nor the funeral march from the "Götterdämmerung." Yet when all available admiration has been bestowed upon the unquestioned earnestness, beauty and ideality of the music of "Lohengrin," and the love duet in "Siegfried," and Wotan's farewell in "Valkyrie," and when all praise has been bestowed upon that extraordinary tone creation, "The Ride of the Valkyries," we have only just begun to appreciate Wagner's genius. Remarkable as these things are when heard in the concert-room, and they are unquestionably among the most remarkable music pieces that exist, it must be remembered that they are merely incidents—"occasional music" for certain moments in the drama. That profoundly passionate piece, the very paragon of funeral marches, beside which all others sound like the conventional tears of hired mourners, "Siegfried's Funeral March," is only an incident in the "Götterdämmerung." It comes, to be sure, near the grand climax of the opera, and celebrates the death of the hero whose history three dramas have had for subject. Grand and impressive as it is in the concert-room, how infinitely more so when it follows the working of the ring's curse in the death of the self-confident hero. But the march is only a little more separable from its connection than many other pages of the work.

But as I said at the beginning, the music, wonderful as it is, is only an accompaniment—the sound-atmosphere in which the events of the drama take place. The genius of the master is just as remarkable in the elevated ideality of the drama as in the music. And his skill as a scenic artist is not inferior to either of the other elements. The latter phase was not shown here to good advantage. The scenery lacked very much of the beauty and ideality of that at Bayreuth, and the machinery was only a

little more complete than that of ordinary grand opera or spectacle. The tawdry effect so universally characteristic of the stage, was never wholly concealed. At Baireuth it is. The scenery of "Parsifal" and the mise-en-scene were as satisfactory to the eye and to the ideal sense as the best landscape painting. Nothing hitched, nothing stuck. Here, on the other hand, many things were clumsy. When Siegfried had hoisted his sail and set out with Gunther to find Brunhilde, I regret to say that he impaired the dramatic unity by sailing out stern first. Nor had I fully realized what an excellent thing it is to have the orchestra out of sight. The gyrations of the conductor and the glow of the lamps of the musicians are a constant reminder of the fact which we would fain forget, namely, that this kind of evolution does not evolute itself. Then, too, the singers sang to the audience. The prompt-box was in the centre of the stage and the prima donna kept close to it at critical moments. She even came down to the front and sang at the audience when she ought to have kept back and sung to the persons of the drama. At the end of the act there was applause, and all parties came out smiling and bowing. All this is absurd. If we pay money to go to the theatre for the purpose of enjoying a dramatic illusion, why should we break up that illusion by calling out the performers before the play is done? And why should we tolerate singing at the audience when the singing is not the end but only a part of the means of expression? Certainly, Baireuth is a lighthouse in a dark place.

The "Götterdämmerung" opens with the love-life of Siegfried and Brunhilde. The honeymoon, of untold duration, begins to wane and the hero longs to depart in search of new adventures. He gives Brunhilde his magic ring, forged of the stolen Rheingold, and she gives him her Valkyrie steed, Granz. The house of Gunther, on the Rhine, is revealed to us. Hagen, the evil genius, is there, and Gunther, the lord, and his sister Gutrune. Thither comes Siegfried in search of adventure, and there he drinks the magic potion, which makes him forget his days with Brunhilde. He falls in love with Gutrune, and sets out with Gunther to win for him the sleeping Brunhilde. As I have already said, they sail out stern first; but as they find Brunhilde, this doesn't matter. By means of the magic helmet, Siegfried assumes the form of Gunther and breaks in upon Brunhilde's privacy. A powerful scene here follows, Brunhilde refusing to receive him as her husband. But Siegfried overpowers her, tears the ring from her finger, and Brunhilde follows him in tears and shame. Siegfried puts Gunther in his place and straightway is back in Gunther's castle, where all is made ready to receive the wedded pair. When Brunhilde comes in she at once recognizes her husband, Sieg-

fried, who has entirely forgotten his life with her. She discovers the ring upon his finger and recognizes it for the powerful charm which the invader had torn from her finger. She immediately charges him with his untruth and declares before all that he is the man who won her virgin troth. Siegfried swears upon Hagen's spear point that he had never had relations with her. Interrupting his oath, Brunhilde lays her own hand upon the spear point and declares with equal positiveness that this is certainly the man. Besides, Gunther knows nothing of the ring. Thus, all the parties are in a strait. But Gutrune believes Siegfried, and they come in together in a bridal procession. Meanwhile, Gunther and Brunhilde are in torrents of passion, and Hagen decrees Siegfried's death. Next day comes the hunt. On his way there Siegfried is warned by the Rhine daughters to restore the stolen ring, or it should cause his death. He turns a deaf ear. At the place of meeting after the hunt, when the game has been brought in, they drink and Siegfried begins to tell of his past life. When he comes to the slaying of the dragon he remembers the song of the birds, and at length Brunhilde comes back to his mind. Just then two ravens fly over his head, and Hagen asks him what they say. When Siegfried turns to look at them he is thrust through the back by Hagen's spear, and falls. All his love for Brunhilde comes back again, and he sings to her a rapturous song. Then he dies. The preliminary motives for the funeral march have been heard for some time. Now they place the body of Siegfried upon a bier and bear it slowly away, and the funeral march is a fit accompaniment. When he is borne home and Gutrune has spent her grief, Brunhilde comes in and claims him for her own. She causes a funeral pyre to be built and lights it herself, trusting to ascend with him to Walhalla.

During all this powerful story the music goes on like an ocean, or a vast river—now smooth, now rough; now quiet, now stormy; now sunshiny, now sombre, and darkly o'ershadowed with clouds. Always powerful, in the mental sense, always full of leading motives from other parts of the work, yet never obtrusive even when most passionate—no such accompaniment to dramatic action has ever before been created. It is as unlike an ordinary opera as the story is like a society play, or as Westminster Abbey is unlike Mark Twain. It holds you, sways you, fills you—not with delight, nor yet with weariness, but with wonder. Through the whole of it there is not one single melody, as usually so called, yet these leading motives, these pregnant suggestions of fate, go on all the time, and so impress themselves upon you that after the opera is over they re-create themselves within your mind at the suggestion of the confused noises in a café, or at no suggestion at all; just as after

hearing a frightful ghost story the clothes upon the chairs in your sleeping-room, or the hangings of the bed, or the moonlight upon the wall, take on the form of disembodied spirits, whose very suggestion makes your hair to rise upon end and your flesh to creep. But not so uncanny is the music of this work, although it is distinctly sombre and grand in the tone of it.

I have already said that the performance was not ideal. The Siegfried, Herr Vogl, is a marvelously fine tenor of the heroic type. He is a great artist, and his work was as satisfactory as we will be likely to hear. Brunhilde, Mrs. Vogl, was not quite so good. She is no longer young, and her upper notes are worn. But she has a pleasing face and is an elegant actress. Many of her passages were extremely fine. My own idea of Brunhilde is more upon the Materna order. Frau Vogl is much the same sort of Brunhilde as Mme. Albani, whom I saw in the same character in "Sigurd," in London. It is a sweet and attractive Brunhilde, but not a heroic one; in short, a blonde Brunhilde in place of a brunette. Kindermann's Hagen was only moderate. He is the conventional basso profundo operatic villain. Fräulein Dressler, as Gutrune, was sweet and pleasing, but not powerful. The three Rhine daughters were "Hofkammer" singers from somewhere, which ought to content us, and the three Nornes, likewise, were singers of merit. The chorus has very little to do, and what it did do was of so unusual a character, that I really do not know whether it was well done or not. Some of it, at least, especially the grouping, was the conventional work of the operatic stage.

The orchestra was a very fine one—nearly a hundred in number. I had no opportunity of counting the players, so I will not undertake to specify its appointment. The players sat nearly upon the level of the parquet—the consequence being that the body of tone was at times too great for the voices. In general, however, the volume was but little too great. To come to comparisons, it is my opinion, and not mine alone, but that of Mr. Wolfsohn, that in beauty of tone and general balance of tone-shading, this orchestra is not quite up to what we have at times heard from Mr. Thomas. Still, the question remains, as Mr. Wolfsohn says, whether, if Thomas had to accompany a whole opera and to give the singers their opportunities for dramatic points, would he be able to do any better than this? Some things, unquestionably, would be better. I miss here the singing quality of the Thomas violins. The wind and brass are not quite up to the Thomas standard. But it is a beautiful orchestra.

The theatre is one of the largest in Europe. There are five rows above the parquet. I imagine that these galleries are all shallow, but upon this

point I shall be in position to speak more authoritatively in my next, as I expect to sit in a higher gallery to-night, at the modest price of six marks (\$1.50). To stand in the "parterre" for four marks I leave for a more favorable time. There are no aisles in the parquet, but you get into the long rows from the sides. The gentlemen who go out to hum the motives between the acts, coöperate and wait for each other upon their return, until the whole line is in order, when they file in, and thus cause the ladies to arise but once. The theatre is an ugly old place. The interior tone of red background, and a sort of terra-cotta cream color for the front of the boxes, evidently furnished the suggestion for the Metropolitan opera house in New York. The house was nearly full—full, perhaps, only a few vacant places being visible. The audience was a good one—not much style, but plenty of intelligent appreciation.

"PARSIFAL" AT BAYREUTH.

Special to the *Chicago Daily News*.

BAYREUTH, Bavaria, Aug. 7th.—"Parsifal," as here given, is a revelation. The performance is of such a consistently elevated character, and so evenly carried out in every department, as to make one realize that in his whole life he has never before witnessed an artistic presentation of opera. The whole thing "makes a one," as the Swedenborgians say. The same master brain which shaped the drama of "Parsifal" out of the misty materials of the mediæval myths conceived also the musical accents to which the words should be uttered, and the orchestral atmosphere of sound which pervades the darkened theatre and influences our mood into consonance with the work. He went further, and planned the clever machinery by means of which the scenic illusion is rendered so perfect that all other stage settings seem commonplace and tawdry in comparison; and he drilled the singers and actors into unity and into a self-forgetfulness which is little short of miraculous in star singers. He also provided for bringing together an audience of the elect out of the four corners of the earth, and for bringing them face to face with the representation under conditions precluding their attention to anything else, and under conditions which also aid in predisposing them to a proper spirit of receptivity for the wonderfully elevated and poetic masterwork which is the subject matter of concern. In order to understand this, let us glance at the affair from the standpoint of a stranger who goes for the first time to the Wagner theatre to hear "Parsifal."

Passing over the inconveniences of getting there, of which it will be in order to speak elsewhere, he finds himself, let us say, at 3.45, in his seat in the theatre. The auditorium consists of a vast parquet, the floor rising

rapidly toward the rear, and the seats running clear across the house in rows which curve but slightly. There are no aisles—you enter and pass out at the sides. There are from fifty to sixty seats in a row. This parquet seats about thirteen hundred. The rear seats are about ten feet above the stage. Behind this are the private boxes for princes and the like; above that a small gallery, the compass and meaning of which I have not yet explored. Once in your place, and having looked about, you find the audience almost all standing, intent upon a certain private box. A very old man and a middle-aged woman are the cynosure of all eyes. The long hair and the wholly characteristic appearance leave no doubt as to the identity of the most illustrious representative of the art of music now living, the venerable genius, Liszt. The lady is his daughter, the Frau Wagner herself. Leaning upon his hand, like one of Raphael's cherubs, in the farther box, is the boy Siegfried, who, if there is anything in heredity and stirpiculture, ought to turn out a man of strong propensities and of phenomenally gifted mind. Liszt stands with his back to the audience, busily talking with a pretty woman, who is most likely an American. You see only the shoulders and the grand cascade of long, snow-white hair. Presently he turns about, and you note with surprise the kindly expression of his face. This was unexpected to me, because all the pictures represent Liszt in an ascetic light. But if I had drawn a very easy inference from the well-known facts of his having given music lessons to all sorts of conceited youngsters of every nationality for forty years, for the mere love of it, and of his having taken his daily doses of new concertos, quartets, and overtures, shown him by the ambitious composers in all sorts of cramped and inexhaustible illegibility, and of his being here upon this occasion, at the age of seventy-three, to sit through a half-day's performance of a work which he probably knew by heart before it was fully finished, and which he has heard over and over again—if I had taken these things into account, I say, I need not have expected anything else than a wonderfully kindly face. And so it was. Strongly marked, a little fuller and shorter than I thought, but so kind and genial under the inspiring light of the bright eyes which looked back into his that we all envied the lady her power of attracting the master more than we envied him the pleasure of talking so long and so pleasantly with so attractive a representative of the sex which is "first in war, first in peace, and first in the hearts of her countrymen."

As you gaze upon the great master whose name has been one of the highest in your inmost ideals all your life long, the light begins to fade away. No doubt the gas man is "turning her down," but so gently and artistically does he do this that your sensation is that of gradually-coming

darkness. The people seat themselves, but the conversation still goes on. You have time to note that those upon the front seats cannot see the orchestra. The players are sunk out of sight, and there is a roof which covers the half of the orchestral inclosure next the audience. I suppose this was in part intended to prevent the light, which the players cannot dispense with, from being reflected through the house. There is a sharp tap, tap, tap, from the conductor's baton. A chorus of "sh, sh, sh," goes up all over the house. There is a stillness as of prayer. After a moment the first notes of the "supper motive" come up from the strings (not absolutely and exactly together, by the way, but the phrases swelled and ended with minute differences among the instruments). The music plays itself. It is a fine orchestra; no better than Thomas's, but no worse, or but a trifle worse. After the first you scarcely notice anything wrong. The tone is soft and mellow, and not too loud. This way of placing the orchestra is the true reconciliation of a rich modern score with the limits of the human voice. At the proper moment the curtain parts and the scene opens. Gurnemanz and the two "boys." The stage setting in beautiful. In the rear distant mountains; in the middle distance a forest lake; in the foreground large trees, hanging vines, etc. Everything is complete. The scene combines the artistic effect of a first-class painting with the appearance of solidity which belongs to nature itself. When the singing, or declamation, or speech begins (you may call it whichever you like), the audience is never addressed. There is no coming down to the front and rallying about the prompt-box, and no lingering on high notes. Gurnemanz, the grand Scaria, speaks to his boys, and they to him give answer, but not to the audience. Kundry enters. It is Materna. There is no applause, no coming down and bowing this way and that, with smirk and smile beguiling the observer far away from the poetic conception of the master-work. She enters and proceeds at once to business. Concerning the character of Kundry, I shall have something to say later. Amfortas, the wounded king of the grail, is borne in upon a litter, on his way to his morning bath. Kundry has brought a new balsam in hope that it may heal the wound which nothing but the sacred spear from Calvary can close. After Amfortas is borne out, Gurnemanz narrates to the two esquires the legend of the holy grail. The story is long, but such is the charm of the music that you do not note it. At the end the prophecy of the grail is told:—

"By pity lightened, the guileless fool,
Wait thou for him, my chosen tool."

This is repeated in four parts by female voices and forms the cue for Parsifal. Following close after the wounded swan and the outcry which

its death within the precincts of the grail has awakened, comes Parsifal. It is Winklemann. He has long flaxen hair, a smooth face, and is clad in a russet-colored tunic to his knees. On his feet are sandals. His arms and legs are bare. In his hand there is a bow and at his belt a quiver of arrows. Gurnemanz's lecture upon his misdeeds he takes to heart and breaks his bow and casts the arrows after it. But his name and origin he either knows not or will not tell. This, then, thinks Gurnemanz, must be the chosen one. Presently they start upon their journey to the castle of the grail.

Before they start, the scene begins to move from left to right. The rear scenes start first, then the middle, then the front. They move slowly, but without hitch. The speed is about a foot in five seconds. In this way something like twice or thrice the width of the stage opening passes slowly before you. For a time Gurnemanz and Parsifal remain visible, then they disappear. The motion becomes a little more rapid. At length the stage is quite dark, and the front scene is opaque. While this is passing, the temple of the grail is set behind. The front scene passes by and the temple of the grail is before us, but as yet in darkness. It is an exquisitely beautiful interior of a sort of Moorish-Gothic design—if there be such a design, for I am not enough versed in architecture to describe it as I should. The aisles extend far down to the back of the stage, and through a distant grated door a faint light enters from the cloisters beyond. In the centre of the stage is the dome, lighted from above. Under this is the altar, a raised platform and table, with a couch for the wounded king. Around the altar are two semicircular tables for the knights, and upon the outside of each a long bench. Upon the tables goblets of gold. From the rear the procession of knights enters. Slowly and to a solemn march they file through the lovely chapel and to their places. After them troops of boys and their attendants file to their places in the unseen choir. By this time Gurnemanz has led in Parsifal. For the next half-hour Parsifal stands in the right of the open stage, his back to the audience, absolutely motionless, gazing in unthinking wonder, as it seems, upon the solemn supper that now ensues. Amfortas is borne in and helped to his place upon the couch. The shrine of the grail is uncovered and the holy cup exposed. All bow before it in adoration. The solemn music goes on like a church, and the silent prayer continues for a long time. Then Amfortas raises the grail; it glows with a mellow light from within, and the kneeling worshippers and the ministering priest are brilliantly illumined by light from above. The light of the grail fades away and it is restored to the shrine, after which the wine and bread are passed, and the knights partake of the holy supper. At the

end Amfortas is borne out and the procession solemnly departs. Meanwhile, Parsifal has not asked the one question which would have healed the king, but subsequent events show that he had taken in the scene to good purpose. Gurnemanz reproves him for a stupid fool and angrily spurns him from the door, while the invisible choir repeats again its riddle of the guileless fool. The curtain closes together again and the music dies away into silence. The lights are turned on, the audience rises and passes out, not forgetting another look at the master, Liszt.

You come out from the sphere of the strange mystery which you have witnessed, not in the feeling of having seen a play, but, as a friend once said to me, as if you had witnessed a religious service. This I should qualify, or more fully define, by saying that it is like witnessing a religious service in a very wealthy and distinguished, as well as somewhat more ritualistic, church than your own. Every connoisseur will recognize this grade of artistico-religious delight, I am sure. In this mood you file into the light of day. Before you, ten miles away, rises the pleasant slope of the Fichtelberge, and the low-lying hills along the horizon give a pleasant setting to the queer old town which lies in the shallow valley before you. I pass over the scramble for beer and lunch. Evidently, the story of the satisfaction once had out of five loaves and three small fishes by a crowd larger than this, is taken here with a grain of allowance. You get your beer and your cheese and you partake thereof upon the piazza, in view of this charming landscape. Meanwhile, you refresh your memory of the work by reading up for the next act. The trumpets sound, and you take your place as before.

At the stroke of the baton the curtain divides and Klingsor's castle appears. In the right foreground is a sort of Dr. Faustus display of darkness, musty books, alembics and things. Klingsor summons his unwilling slave Kundry. After a considerable prelude of sulphurous vapor (which is steam let up through a crack in the stage and colored by electric light—and very effective it is, too), Kundry appears rising very slowly (one foot in ten seconds), through a trap in the centre of the stage. She has a white veil over her head, like a shroud; it is brilliantly lighted by the electric light. She utters her voice of protest at Klingsor's demand, but without moving in the slightest or revealing her face. While the dialogue is in progress, Klingsor ascends a flight of steps and looks out through the castle battlements. He sees there Parsifal approaching, coming in search of the sacred spear. The wardens attack him, but he wrests their weapons from them and puts them to flight. Klingsor describes the fight and admires the stranger's valor. But he declares that Kundry must deal with him. She descends through the trap, and the scene changes

by magic; the tower and Klingsor sink down and the magic garden rises up. The flowers are everywhere. Roses from ten inches to two feet in diameter; daisies with petals a foot long, autumn leaves, hanging vines, and so on. The stage is a parterre, a blinding mass of color, even to the top of the scene. Parsifal enters. Then come the flower maidens to beguile him. It is the ballet, but they do not kick up their heels. I strongly suspect, from what I have read, that the costumes have grown longer with time. They have skirts like flower petals, reaching to their ankles; as they move, the petals part and give glimpses of the legs slightly above the knees. When the ballet has tried its charms in vain upon Parsifal the voice of Kundry is heard. From one side Kundry glides in, reclining upon a couch. She is in brilliant array, though not so slight or diaphanous as the stage direction would lead one to expect. For full fifteen minutes she sits entirely still and sings to Parsifal a long story about his mother, and upon other subjects likely to move a sensitive soul who is away from home. He is attracted to her, naturally enough. He draws nearer, and at length sinks at her feet. She puts her arm about his neck and draws him to her; upon his lips she imprints a long, very long (thirty seconds at least), paroxysmal kiss. The first ten or twenty seconds do not appear to move him; but toward the twenty-fifth second he trembles, he sighs, he breaks from her, and makes into the centre of the stage, where he declares that he now understands what he saw at the castle of the grail. When his passion has partially subsided Kundry arises to her feet and approaches him, working again a new set of blandishments, but without avail. When he angrily bids her away, the scene changes at the rear, and Klingsor appears upon the castle wall, where but now were flowers. In his hand he holds the sacred spear, stolen from Amfortas while he was locked in sleep in Kundry's arms. He hurls the spear at Parsifal, but it poises above his head and floats there. Parsifal grasps it with rapture. He makes with it the sign of the cross, and, with a crash, the castle and Klingsor disappear, the flowers wither, Kundry falls apparently as dead, and desert mountains are seen at the rear. Parsifal starts off, but pauses upon an eminence at the rear, and the curtain closes. The light returns, and again you file out into the evening twilight, for it is now 8 o'clock.

The third act shows us the dominions of the grail. Beautiful mountains in the rear; in the middle distance a grassy and flowery meadow. In the foreground upon the left a hut; upon the right a thicket. An old man comes forth from the hut. It is Gurnemanz grown old. He is still dressed in the cloak of the grail. Two youths enter, to whom Gurnemanz relates the history of the sick king Amfortas, and brings the history

down to date. The youths depart. A moaning is heard in the thicket, and when Gurnemanz searches there to find out the cause, he brings out the insensible body of Kundry, whom for years past he has not seen. He seats her upon some rocks by the spring, and after wetting her head and chafing her hands, he succeeds in bringing her to. No sooner is she fully restored than she goes to Gurnemanz's cabin and begins to "slick it up." She takes a pail and comes to the fountain for water, which she carries to the cabin. A knight enters, clad in garments of mail, his visor down. He sticks his spear in the ground, and, having removed his helmet, he kneels in worship before it. The knight is Parsifal, older and manlier than when last seen. Gurnemanz recognizes him and also the sacred spear. So, also, does Kundry. Parsifal relates his adventures: how that for years he had sought the castle of the grail, but in vain. He had been in many wars and had fared hardly, for he would not employ the invincible spear of the grail for his own defence. Gurnemanz leads him to the fountain and seats him where Kundry had just sat. There he baptizes him and anoints him king of the grail. Kundry kneels at his feet, takes off his greaves and bathes his feet, which she afterward anoints from a flask which she takes from her bosom; she then wipes them with her hair. Parsifal then baptizes Kundry with water dipped up from the same fountain wherein Kundry has just washed his feet. The informality is pleasing, and thus all things come together again. These being settled, they set out for the castle of the grail. The scenery moves as in the first act, but in the opposite direction. The chapel of the grail appears once more. Processions enter bearing the dead body of Titurel and the sick king Amfortas. The knight is old and haggard. For a long time he has not celebrated the holy supper, hoping in this way to die at length, for his wound has become agony to him. Parsifal enters, touches the wound with the sacred spear, and takes his place as king of the grail. The chorus sings again from the heights and the curtain closes together. The solemn and mysterious play is at an end. You go out full of it. You are ready to say that you have never in your whole life seen anything like it.

CHAPTER SIXTH.

CONCERNING THE PSYCHOLOGICAL RELATIONS OF MUSIC.

The various operations of cognizing music may be reduced to three categories: perceiving, comparing, and concluding. For example, certain sounds fall upon the ear, where they make impressions of number and intensity. The investigations of Helmholtz have shown the mechanism by which the ear takes cognizance of impressions of pitch and power. We may suppose that this part of the work is done automatically, just as in the harmonic telephone the receiving forks answer to their own rate of vibrations only. So the little filaments spread out in the cochlea of the ear probably answer to specific rates of vibration, or nearly so. Upon whatever filament a series of vibrations falls, the report of it is immediately sent upward to the brain, to what is called the cortex, or outer coating of it, and to the particular part of this having to do with musical sounds, or, more properly, impressions of pitch. Now the cortex of the brain is one of the most curious structures known to Anatomy. It is of considerable thickness, nearly that of sole leather, and if spread out would make an irregular circle nearly two feet in diameter. This coating consists of what is known as the gray matter, in which all thinking is done. It is composed of cells, myriads upon myriads of them, microscopic in size, by far the most of them merely germs of what some day may become cells, but which at present are merely material for future use. The abundance of this material is such, that the most profound thinkers never use half their possibility of brain development. The wonderful thing about the brain is that these cells are developed into maturity under the desire or the effort to use them. A few of them are half developed at birth. Such are those having to do with the instinctive and functional acts of infant life. No sooner does the child feel the pressure of the air than it begins to breathe, and no sooner does it feel a pressure upon its lips than it attempts to suck. Just in the same manner the young duck begins to swim as soon as it feels the water.

The localization of function in the brain is now definitely established. One part of it is devoted to impressions of one kind; another to those of another, and so on. This fact has been established through the observed effect of lesions in certain parts of the brain, and the losses of mental

power accompanying them. From one part of the brain to another there are minute fibres, called commissural fibres, which run like telephone wires, by thousands, here and there in every direction. The supposed design of these fibres is that of conveying from one part to another intelligence of its having been affected by a sense impression. Of course, we really know nothing of the actual mechanism by which sense impressions are compared with each other, and conclusions arrived at concerning them. There is reason to think, however, that nothing like a conclusion is arrived at until after a sense impression has been reflected back and forth between several of these departments of cells, or between the different localities of a single department. Whatever the subject of knowledge, whether musical effect, information, or what not, it comes into the brain only as a report of a particular kind of impression upon a nerve or nerves of sense. It is by transactions within the brain that the individual concludes concerning any impression that it is pleasurable, or that it gives him information in any way. When the impressions reported are those of articulate speech, they must be classified into their consonant and vowel elements, these grouped into words, and these again into sentences, before the mind is able to conclude anything concerning them. Sentences, again, must be remembered, and comparisons continued through several minutes, it may be, before the individual is able to follow the conclusions to which the speaker would lead him. This which thus demonstrably takes place in speech, takes place still more in music.

The elements of a music piece are: (1) rhythm, (2) determinately selected pitches, (3) certain gradations of tone color, (4) rates of movement or pulsation, (5) variations of intensity, and (6) an articulate organization of form. Each one of these departments involves the registry of a large number of sense impressions, and their comparison with each other, before anything intelligible can be concluded concerning the piece to which they belong. In rhythm, for example, there is a comparison of the succeeding impressions with the registered record of the former, as to their frequency; these comparisons are so accurate as to enable the hearer to perceive that certain impressions are multiples of others, as to their rate of frequency. The persistence of impressions of this class is perhaps greater than that of any other. This is shown in the fact that a motive of decided rhythm, having been several times heard already in the course of a music piece, is immediately recalled to the memory when only its rhythm is repeated, although the transformation of the melodic intervals may be so complete as to amount to an inversion. It is also seen in the fact that one not unfrequently marks time to music heard at a distance while he is engaged in something near at hand, as in

conversation, for instance. It is also known that a person engaged in writing or study, occupying apparently the whole attention, can be made to whistle a familiar air, if the air be sounded very softly in his hearing. If it be sounded loudly, his attention will be consciously drawn to it, but if softly, he will not know that he has heard it, but will unconsciously whistle it or hum it, according to his habit of giving expression to the music that happens to engage his fancy. In fact, the impression of time is so strong in music that the pulsation of the rhythm is the one and single element of unity between the different movements of sonatas, symphonies, etc., where there is no repetition of key, no repetition of motives out of the other parts of the work, and nothing apparently upon which an impression of unity can base itself. It was formerly supposed that the unity which all good observers felt between the different movements of a sonata, and which all æsthetic laws required to subsist between them, was only what they called "an ideal unity;" as if there could be an ideal unity, or any kind of unity, in our present state of existence, at least, without some physical basis through which it could impress itself upon the attending consciousness. In this case that element is the pulsation of the time. If there be another, it will come out later in the present discussion.

The most elaborate comparisons undertaken by the brain, in respect to music, are those having pitch for their subject matter. The object of all comparisons between one sense impression and another, is that of finding between them a principle of unity. It is for this purpose that the mind seeks to group vowel elements and consonant elements into words, and words into sentences, and sentences into discourse. Now in music the comparisons in respect to pitch are of the most elaborate description. We can hardly hope to take account of more than a small part of them; and in doing this we are very likely to regard comparisons as simple which in reality are highly complex. What *is* a melody, as we conceive it? It is, first, a succession of pitches, having an agreement of what we call tonality, as well as a definitely organized movement and motivization in time. The perception of the principle of tonal unity involves the conception of all the tones in the key; or of so many of them as are necessary to render the key certain. We do not know how many subconscious comparisons it may need to produce this impression; but be they many or few, they must all be made before we can be certain that a particular succession of pitches is part of the same key. This latent impression of the key as a whole is present and enters into all our enjoyment of a melody; or, at least, into such an enjoyment of it as would enable a musical person to repeat it. This involves the perception or

recognition of all the points of repose, as to their place in key, and of the place of every tone between them, because in this the meaning of the melody rests.

It is easy to demonstrate that what we call the mental effect of tones in key rests upon a perception of the key as a whole. For instance, there is a melody called Dennis, well known to American singers. This melody is of a gentle expression; its quality is due, apparently, to the fact that out of thirteen accents five fall on "do," the tone of repose, and three on "mi," the steady or calm tone, to use the naming of the Tonic Sol-Fa. The vigorous tune Warwick, on the contrary, has seven accents on "do," one on "re," four on "mi," one on "fa," nine on "sol," four on "la," and two on "si." The strength and dignity of this melody, therefore, reside in the preponderance of sixteen accents upon those two extreme points of the major scale, "do," the tone of repose, and "sol," the strong tone. The same influence will be found to pervade all the slow movements of the great masters, one and all; in so far as they possess an expression residing in the key relationship of the tones themselves, it will be found to correspond with the preponderance of accent upon particular tones of the scales. It is important to observe that the coloring of tones in key belongs to them merely as tones in key. As soon as these tones are put in some other key their characteristic expression changes, as any reader can easily convince himself by a few well-managed experiments. This being the case, it follows that the expression of tones in key will not be perceived by a hearer unable to remember and compare, and refer each tone to its proper place with reference to the other tones heard in the same connection. Not only those heard in the same connection, but with those which *might* be heard in the same connection. For it is not necessary that all the tones of the key should actually be present; it is enough if there be sufficient to afford a well-grounded conception of the key. The mind supplies the missing links, just as it supplies missing lines in many drawings and other representations or suggestions of familiar things of the external world. Or, just as it supplies the missing elements of imperfectly articulated speech. In fact, it is not until the hearing is partly lost, that one realizes the extent to which missing links are supplied in comprehending the half-delivered discourse of indifferently educated persons.

But it is in the department of harmony that the most elaborate comparisons are entered into. There is reason to think that not only are chords heard, or felt, as we say, in connection with all melody tones of sufficient duration, but that all chords belonging to the key are conceived along with it. It is this which renders certain kinds of advanced music

so difficult to many who have neither the heredity nor the habit of taking into account so many remote relations. When the harmonies are strange, and when they are not those which the uneducated ear would anticipate in connection with the melody tones, the ear finds itself unable to discover the underlying principle of tonal unity as to the harmony, and the music becomes unenjoyable, if not unintelligible. That far-reaching comparisons of this kind are made over much wider reaches of territory than is commonly supposed, is shown by the fact that modulations are immediately appreciated by an expert listener. No sooner has the tone of transition entered than he immediately feels the new key, both for itself independently, and as related to the old one. It is the difficulty of doing this, in certain cases of misleading digressions of key, which forms the principal obstacle to the reception of some of the music commonly known as "advanced," by which is meant that music of the modern German school, dealing largely in enharmonic changes and remote transitions. These transitions do not all of them rest upon considerations of a true tonality, but are liberties which the composer feels himself warranted in taking, his justification being derived from the tempered scale of the pianoforte and other instruments of fixed scale. To pass directly from the key of E flat, for instance, to that of D sharp, through what is called an enharmonic change, wherein the two key tones are supposed to be identical, is of the nature of what in speech is called a pun, and to many hearers it is misleading in the same way. While they are seriously comparing and coördinating the impressions within themselves, under the belief that the bond of unity in the case in hand is to be found in the tonic of E flat, the composer sweetly changes his signs, and immediately proclaims himself in the key of D sharp. This would not make a difference to the hearer, guided by his ear only, if it were not for the retinue of keys, relatives of the new ones, which the change drags after it. Still our musical theory is so inexact at present that perhaps we do not really know how far the correspondence of enharmonic keys exists in a true musical science.

The difficulty of finding the true bond of tonal unity becomes even greater when modulations by means of the diminished seventh are introduced and resolved in different ways, as they often are. To follow these requires the same kind of quick musical consciousness and indifference to considerations of strict veracity, as are needed for appreciating the play upon words which constitutes much of the so-called wit of society. The sincere person, accustomed to weigh his words, and justly to measure every part of his sentences over against that part of the truth which it is supposed to represent, finds himself left in the lurch at every step of these

happy-go lucky dancers along the highway of art. To enter into this branch of the subject fully would be impossible without the aid of examples in musical notation ; and for these, perhaps, the reader would not care. The question is a curious one, but the student can easily settle it for himself by analyzing any piece of Wagner's, for example, and calculating the vibration frequencies of the different tones, and of the new key tones, taking the starting point of the composer, and allowing for every change of key. He will find it very difficult to justify some of the changes, in the light of a pure music theory. A comparison of this kind undertaken some years ago concerning the modulations of a part of Wagner's "Lohengrin" yielded the following results :—

The passage analyzed was the first three lines of page 23 of the Novello edition of "Lohengrin." It commences in the key of F. At the third measure, however, where Frederick says, "Now ye shall know the name of her accomplice," the key changes to F minor. Now, taking middle C at 522 vibrations, which is about that of the so-called French diapason, and computing around to A flat major, we have an F of 687 vibrations per second. This F is supposed by Wagner to be enharmonic with the former one, or, more properly, identical with it, as, indeed, it is on a tempered instrument. In the next line he modulates into A flat, 824 vibrations. There is then a transition into C flat, in which A flat would have 814 vibrations per second. In the third measure of the same line there is a C flat having 977 vibrations per second ; this is enharmonically changed to B natural, which would have 978 vibrations, and is, therefore, practically identical. In the next line there is a C sharp of 1101 vibrations, which is enharmonically changed to D flat, of 1099 vibrations, as before, practically identical, etc. In so far as these inductions prove anything, it is that Wagner's transitions are singularly near a correct perception of pure mathematical harmony.

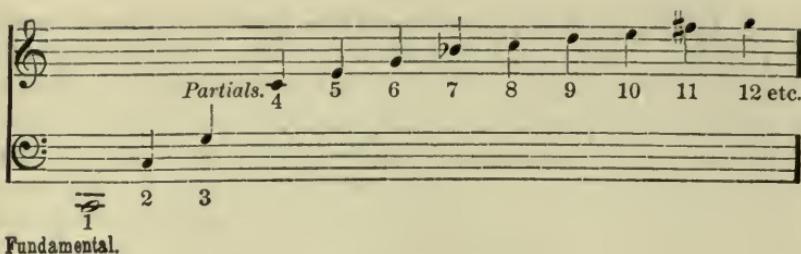
But setting aside difficult questions of this kind, it remains incontrovertible that there is no intelligent hearing of music without comparisons of tone with tone, as to their underlying bond of unity upon the harmonic side, extending over wide reaches and involving extremely complicated coöordinations of sense perceptions. It may be claimed by those intent upon simplifying this operation, that the impression of key does not rest upon any such extended induction as here represented ; but that any chord is received and accepted by the ear if it be sounded long enough, or if the impression of it be not interfered with by the entrance of some other chord having possible claims to the rank of tonic. This is undoubtedly the case ; but it happens that in all music this other chord always *does* enter ; and not one alone, but many others, some of them so

remote as not easily to be referred to a place in connection with the chord which the ear wished to take as its point of departure. In rejoinder to this we may be told, and told justly, that the ear accepts the chord as that of the tonic, if it hears it *oftener* than any other, and especially if such a chord begins and ends the passage. This gives the ear the leading of the first impression, and leaves it with the advantage of the same chord for farewell. The observation is perfectly just, and it is altogether likely that the conclusion of tonality often rests upon no more complete evidence than this. Still, evidence of this kind will not convince the ear unless the chords that intervene between the opening and the closing are compatible with the tonic suggested by the opening and closing chords. It is only necessary to consider the disturbing effect of hearing a melody in which unexpected transitions occur, to recognize the fact that however contented the ear may be to receive and rest upon its first impression as to the tonical relation of the chord or passage, it is, nevertheless, engaged in a continual series of comparisons between every chord in the series and its supposed place in the key, upon the hypothesis of this first chord being the tonic.

That this theory is just, also appears in another way, namely, by considering the manner in which the law came to be established in harmony that the tonic chord should begin and end a composition. Such a law could have had no other origin than by a sort of survival of the fittest; that is to say, through observing the fact that a certain chord in every key was more satisfactory to end with than any other chord in the same key. That the same chord was also more satisfactory as a beginning, was probably a later conclusion. The early church keys, persisting long after the discovery of harmony and the settlement of a true tonality for secular music, are evidence of the extent to which the ears of many generations were uneducated to this perception. At the present time it is extremely difficult to induce professional musicians to compose in these old tonalities, and it may be doubted whether a single composer of the present time does so purely, according to the early tradition of the allowable progressions of harmony in these keys. Modern ears have become so sensitive to harmonic progressions, and the relations which every progression implies, that they are offended by these progressions, which, to our fathers or grandfathers appeared allowable, at least for the uses of religious worship.

The persistence of musical impressions within the mind and the comparison of newly-received impressions with those received before, appears again in the phenomena attending the comprehension of tone color. There are very few hearers of a symphony who do not observe the

entrance of the same motive in a different tone quality from that in which it was introduced at its previous appearance. Pleasure in observing these changes is one of the elements of delight in hearing a symphony. Now, we know that the impression of tone quality, as between a clarionet, a violin, a horn, etc., rests upon the different manner in which these tone qualities respectively affect the organs of hearing. Tone quality results from the different combination of overtones in the klang. Along with the fundamental tone, which gives the name to the note sounding, and which we suppose ourselves to hear singly, it is demonstrated, by Helmholtz and others, that we hear several partial tones, higher multiples of the fundamental. To such an extent is this true, that a well-made tone amounts to a complete chord, covering four octaves. The overtones are too faint in most cases to be heard by the "naked ear," but by a simple experiment with resonators, it is perfectly easy to bring out any one of them that the hearer wishes to examine. There is an experiment that any one can try at the pianoforte, which will show this matter in its simpler elements at least. Let the key for middle C be pressed down and held without allowing the hammer to touch the string. The piano is as silent as if the key were not held down. Now, while holding this key, strike the C two octaves below, forcibly, and after holding the key about a second, withdraw the finger from it. The middle C will now be heard sounding out quite clearly. It vibrates in sympathy with the same tone, which was really included in the compound sound of the low bass C, just ended. The reverse of this experiment will also prove itself. If the low C be held without allowing the hammer to strike the string, and middle C be sounded firmly and held about a second, the low C will be heard sounding the same pitch after the finger is withdrawn from middle C. In the same manner one can detect many other partial tones. Low C, for instance, will cause G to sound above middle C; and C in the next octave, E above that, G, B flat, and so on. So, likewise, in the better specimens, the upper notes will bring out the partials in the low bass strings in the reverse of this. In every case we are to remember that no tone will resonate sympathetically except those which are already in the tone of the string itself. Upon a poor instrument, only a few of these partial tones can be heard. These partial tones go up by the natural ratios, according to the numerals 1 2 3 4 5 6 7 8 9 10, etc. Or in notes thus:—



What we call tone-quality results from strengthening certain ones of these partial tones and suppressing others ; or, rather, in a complete tone all are present, but as one instrument has one kind of imperfection, and another another, so one instrument fails in one set of partials, and another fails in another. A pure tone contains them all, just as white light contains all the colors of the spectrum. The point to which all this discussion tends is the recognition of the fact that in remembering tone quality we are remembering the impression which these partial tones made upon the filaments of hearing. And that when a new tone color comes in with a motive which recalls a previous act of hearing, we recall with it the entire combination as received and recorded in the apparatus of the ear and of the brain. It is upon the persistence of impressions of this kind that all enjoyment of tone-color rests, from the simplest contrasts to the gorgeous instrumentation of modern music.

To return to the impressions of rhythm and number, there is also the modification of the effect of a musical composition, according as its rhythmic pulsation goes fast or slow ; according as it has fever, or is in a state of vitality below the average. A slight acceleration of the movement produces an animating effect upon the listener, which shows that he must have been conscious of rate of movement as well as of the relations of longs and shorts in the combinations offering themselves for recognition. In the same way that acceleration produces the effect of increased animation, a slower rate of movement produces the effect of an approach toward a repose. Both these facts are conclusive that the impressions of speed must have been recorded, or, at least, observed as an integral part of the total, else a modification of them would not have been recognized as a modification of the general effect.

Distinctions of intensity are of the same nature. Not only does the ear keep account of the rate of movement and the relations of length, but also it takes into consideration differences of intensity, as representing a greater or less interest on the part of the performer in this which he is bringing us. Hence, an increase of force is recognized as implying greater interest and a diminution of it as a lessening of it. Into this

category enter also all accounts of accents and emphasis, through which the ear arrives at a comprehension of the rhythms, the different estimation it is to place upon the various melodic and harmonic ideas in the work, etc. All these, and no doubt many others that might be mentioned, go to show that these sub-conscious comparisons of tone impression with each other are of an almost endless variety, and are maintained over wide reaches of comparison. They imply, therefore, the development, or rather the progressive sensitizing, of an apparatus already provided, but for many centuries little used. It is to the development of such apparatuses that music teaching has to address itself.

The relation of all this to the art of teaching music is not to be overlooked. In general, we may say that music teaching is the art of teaching how to *think music*. It is this that renders the process so unequal in the length of time it takes, and in the quality and amount of results obtained. For, as the previous parts of this discussion show, the ability to think music depends upon the activity of certain parts of the brain, but little used in the affairs of daily life. It is true that the nature of vowel quality is exactly the same as that of tone quality in general; the different vowels differing from each other exactly as the tone qualities of instruments differ from each other; that is to say, in the prominence of certain ones of the overtones and the comparative weakness of others. This, which, when first announced appeared extremely unlikely, Helmholtz was able to demonstrate, by means of his apparatus of harmonic tuning forks, by the aid of which he reproduced all the vowel qualities at will. Vowel quality, moreover, is of the same nature as harmony; for the perception or the tacit recognition of certain overtones in the *klang* of a single note is of the same nature as the act of recognizing, concerning a certain combination of tones, that a part of the combination agrees with the fundamental in the same way as its own overtones each agree with it, that is to say, that the combination forms a chord; or that they do not agree, and, therefore, that they form a dissonance. Hence, we are confronted here again by a fact which meets the psychologist at every turn, namely, that the individual is provided with mental apparatuses which not only subserve his daily wants, but which have in them possibilities in many higher directions; they contain the potency of an almost infinitely more advanced development in the direction of general utility, and along with this the quality of availability for many higher purposes not directly subservient in preserving life. It is upon these higher uses of the sensory apparatus and its connections of a registering and comparing kind, that all the fine arts rest.

So here, in regard to the relative quickness of the apparatuses by

the aid of which music is appreciated and enjoyed, we are brought back to questions of heredity, temperament, inherent aptitude, and the like. When there is a hereditary aptitude for music, all the apparatuses concerned with it are in a state of readiness, already half developed, requiring but a small stimulation from without to call them into full maturity. In fact, it is not always necessary that the stimulation from without be of a distinctly musical quality; in some cases, any stimulus, even of a purely literary kind, has power to call up and set in operation these peculiar musical activities. This we see illustrated in the case of those preëminently gifted individuals whom we call geniuses. As soon as the mind begins to act, the activity of the musical faculties is irresistible. Moreover, these gifted ones not only act in music by their own nature, and, in some cases, almost without any instruction whatever in the technic of the art, but they seem at the very start to have the whole art within them fully developed, as we might almost say. This was the case with Mozart, who, at an early age, showed himself master of all the technic of musical composition, not excepting those most intellectual parts of it, double counterpoint and fugue. It has been the same with many others, although in less degree. There was Franz Liszt, for example, who, at an early age, not only showed himself the master of the art of piano playing as it then stood, but spontaneously created an entirely new set of effects and new ways of obtaining them. At the very first appearance, he introduced certain ones of the peculiarities of the Liszt technic, which has revolutionized piano playing. It was the same with Chopin, who, although not appearing before the public of all Europe as a wonder child, did something hardly less remarkable, in producing at the early age of nineteen or less, and by the aid of the instruction of a pedantic provincial teacher, his wonderful studies and concertos, which have remained for fifty years masterpieces in the art, and mark an entirely new epoch in the history of piano playing. It is the same at this moment of writing; when we read of Josef Hoffmann, who, at the age of thirteen, shows himself a true virtuoso and an artist. What happens in these cases is the existence of a musical apparatus in the brain, of great grasp and quickness, and along with it a muscular system ready to respond to these inner conceptions, without the painful process of practice, by the aid of which alone the average individual is able to employ his fingers in reproducing his musical fancies.

In a majority of instances, even in these times when the art of music is more natural than it ever was before; or, to say it differently, when the average individual is able to think music with less training than at any previous time of which we have record; in a majority of instances,

I repeat, it is necessary to subject the pupil to the influences necessary for developing those parts of the musical apparatus which happen to be more sluggish than the others. Differences of this kind will be found of the most varied and unaccountable character, depending upon obscure relations of heredity, concerning which it would be difficult, if not impossible, to collect the information needed for rendering the inductions of any scientific value. These differences the teacher has it for his task to overcome and equalize by a process of education, until the pupil is able to think all parts of musical discourse, and to do so without effort, according to the analysis already given above. It is not the place of the present article to undertake to give directions as to the methods by means of which this part of the teacher's work can be accomplished. This would be a question of musical pedagogy, and will come up in another place. (See chapter on The Operative principles of Teaching Music.) For the present it is enough to call attention to the fact that all this work is to be directed and controlled by the musical judgment of the teacher, acting under an intelligent comprehension of the real nature of the pupil's mental deficiencies as a musician and his own acquired skill in devising methods of overcoming them. It may be remarked, in general, that in performing this operation for the pupil, great aid will be derived from conducting the studies in such a way as to avail oneself of the aid of the quickening influence of the musical imagination; for we must not forget that the most potent factor in the work of calling into activity these half or wholly latent capacities of the brain, is the desire on the part of the individual to make use of them. Hence, everything depends upon awakening such a desire at the earliest possible moment in the course of musical instruction. Commonly, indeed, this desire will be found active, being, in fact, the operative motive inducing the pupil to place himself under instruction; but in those cases where the parents have placed the pupil under instruction without the especial desire of the pupil himself, it is the teacher's first work to awaken such a desire. When the desire is already active, it is of the first necessity that it be kept active. This will only be the case so long as it is fed; that is, so long as the musical faculties have something to do which they can take pleasure in. By this it is not meant that the study is to consist exclusively of such material as will furnish pleasing exercise to the pupil at every step of the way and for every consecutive five minutes it may be necessary to spend in practice; this would be impossible, or if possible, would speedily degenerate into merely drifting with the caprice of the pupil. But it is necessary and entirely possible, without sacrificing any good end of the instruction, to conduct the lessons in such a manner that every one of them shall render a

certain gratification to the faculties of musical appreciation, and in so doing shall advance their education, as well as that of the fingers and eye, and so conduce to the progressive education in taste, without which instruction in music will degenerate into mere pastime or a preparation for making a show of one's virtuosity, beside which the tricks of the rope walker or the trained monkey have equal interest and are worthy of more respect.

In conducting the lessons for the purpose of supplying the missing ingredients of a true musical appreciation, the teacher will find it necessary to ask himself in relation to every pupil—What are the real deficiencies in this case? To meet them there will be accent exercises upon scales and arpeggios for time and rhythmic education; arpeggios and broken chords for educating the harmonic perceptions; the exercise of memorizing music in order to improve the attention, as well as for adding to the pupil's inner stock of musical ideas, in the hope that presently they will awaken into a life of their own, and he begin to possess within himself a musical fancy, just as all persons imagine to themselves discourses with friends, which have never taken place. All of these elements will help each other. But of this in the other place referred to.

The mention of musical fantasy brings up the distinctive element in the mental operations of those who compose music, rather than merely perform it. There are three grades of musical fantasy: First, that in which the individual is able to remember and recall simple musical impressions, such as melodies, chord impressions, and so forth. Second, that in which he is able to enter into and follow appreciatively the higher kinds of musical discourse, when a record of it is presented to him, but is not able to recall it when the notes are taken away. In cases of this kind, the individual often has a vague conception of the musical effects composing the fine piece he may have played, and is even able to criticise intelligently the performance of it by another, but when thrown upon his own resources he is not able to recall it distinctly. Third, those who immediately remember any musical discourse that pleases them, and who invent long discourses of their own, or more properly, who hear within themselves long musical discourses, which often appear to them to be finer than any that they play from the notes of others. The latter conviction, which is the natural attitude of the mind in regard to any production of its own (just as it is of the body in regard to its own productions) is fallacious. It needs to be corrected by the operation of the sober judgment; when this is not able to do the work, it must be left to the performance of others, who commonly will take pleasure in correcting whatever hallucinations of this kind an author may indulge himself in. Often these persons go too far; in this case the individual

must await the slower second thought of his public. But it is for the teacher to school himself to recognize the state of his pupil, in respect to the ability to reproduce musical discourse, and to lead him from one state to another, until the highest possible has been reached.

In respect to this latter point, it is better to expect too much than too little. There are teachers whose normal attitude toward pupils is that of a lofty superiority ; they do not expect of them anything more than that which ought to form a part of the common ability of the average man. Upon this prepossession they order the studies, and accordingly, not having provided means for calling out the higher faculties, they rarely are disturbed by them. This method of teaching has certain advantages, chief of which are its saving the teacher a world of trouble, and its leaving the pupil to exercise himself creditably within the safe lines of his easy activities. The opposite method is rich in discomforts, equally for the teacher and for the pupil. It places the teacher under a load of anxiety, where he must continually be doomed to disappointment through the failure of his best-laid schemes for awakening musical life in the pupil ; it renders the pupil unhappy through having continually expected of him more than at the time he is able to perform. It is doubtful whether any teacher of the kind properly to be called stimulative, has been skillful enough to perform his proper work with the pupil without experiencing the difficulties above described. Nevertheless, it has its reward. Now and then he encounters a talent, which at first appearances gave no more signs of richness to the inexperienced eye, than the rough ore of gold, but which, under the judicious course of polishing and so on, presently came to shine with a beautiful lustre. These two methods of teaching are represented by an equation whose terms do not exactly balance. The teacher of the first kind will continually miss the development of talent which a different course of instruction would have called into activity ; that of the second will constantly endeavor to awaken talent where talent does not exist. It is for the individual to decide for himself whether the discomforts of the latter process are more than compensated by the occasional delight of complete gratification. In the opinion of the writer the compensation is ample.

The composer differs from other musicians in this, that instead of carrying on within himself discourses about music, as to its theories, its composers, its knotty problems, etc., he *thinks music*, and thinks music so clearly that he perforce must write it down, in order that others may share in the product of his fancy. We must not forget that the compositions published by any composer, even the greatest, are only a small part of the compositions which have played themselves through in

his thought. Many of these, no doubt, were heard but once, having been called into activity by some momentary stimulus in the environment. Others have haunted his fancy for days, and it may be for weeks, eluding his earlier efforts to write them out, and yielding only to long reflection. This it must have been which took place in Beethoven's case, as shown by his note books. For instance, the beautiful air of Schiller's "Hymn to Joy," in the finale of the Choral Symphony, was noted many times, at intervals, before it assumed the form in which Beethoven finally used it in the score. At the last noting he marked it "This is the one." What did this mean? Had he only now been able to shape a refractory bit of material into form? Or was it only now that he had been able to reproduce correctly a melody dimly heard in his inner consciousness some time before? Most likely the latter. So, too, the corrections which Beethoven was never able to find the end of, so long as he kept a score by him, are to be understood as the successive approximations to an ideal clearly conceived, but of which in the hurry of writing some little particular had escaped him. Many of these alterations are of a very slight nature, almost analogous to the crumpled rose leaf which disturbed the sleep of the gentleman of Sybaris. A single note is taken from one instrument and given to another, while the note of the other is given to the first. Changes of this kind were based upon the consideration that in the particular part of the compass of the instruments, one way or another would change the emphasis upon the different members of the chord, owing to the effect of the instruments in different registers. A horn note a little too high, for example, might sound too loud, a bassoon note too low might sound grotesque, etc.

The student of music will never tire of admiring the nicety with which the great masters have reproduced their conceptions. Schubert is a shining example of this kind. Without having heard his finer compositions, he shows, nevertheless, a progressive mastery of the finer effects of orchestral shading, wonderful, when one considers how little aid he derived from hearing music. His symphonies have a distinctive coloring, due to his use of the wind instruments, and a delicacy of shading which at times is not inferior to the very happiest of Beethoven's. The unfinished symphony, for example, is a work as delicate as a Madonna by Raphael, and less earthly in its beauty. Nothing more exquisite could be imagined. The wonder in Chopin's case is less, that he should devise an original way of playing, or rather new effects attainable by methods of playing, only slightly different from those prevalent in his day, for he had the pianoforte under his fingers, and could try everything and compare the method of writing with the effect itself at his

leisure. Beethoven and Wagner, also, enjoyed a varied experience in the orchestra, in their earlier years, which enabled them to judge at sight of the effect of this, that, or the other combination. Berlioz, on the contrary, created his instrumentation out of his own material, having comparatively little experience with orchestral work from within; nevertheless, he was a born tone colorist, and a born leader. He knew to a fraction what would do, and what would not do. He knew when to break rules, and when to follow them. It was the same with Mozart, who never played in an orchestra. Yet he knew instinctively what combinations of instruments would produce the effects he desired.

What happened in these cases? Were these geniuses superior to all dependence upon incitation from without? Did they know by instinct how a combination of instruments would sound, without having had any aid in forming an idea of their individual powers? Nothing of the sort. This would be to claim too much for them. The probability appears to be that they had hearing apparatuses of exceptional quickness and retentiveness. A mere hint was enough for them. When they had heard an instrument once, they remembered its quality, and as happened in the case of Berlioz, were able to picture to themselves the manner in which new and peculiar effects could be produced by means of it. Berlioz, also, took account of the effect of doubling and redoubling the instruments of a particular kind, and in this way originated grand effects peculiarly his own.

It may already have occurred to the thoughtful reader that this account of the psychological relations of music stops short, just as all accounts stop short, of a full account of the transactions between the bodily apparatus and the spiritual relations attending its use. It is a long way between the sub-conscious weighing and measuring of musical relations, as to their agreements or disagreements in pitch, power, length and frequency, to the higher enjoyment of a truly artistic pleasure in music itself. In the latter case the feelings are touched, and moved upon in a multitude of ways, as evanescent as the changes of a sunset sky, and apparently as unconditioned by material relations. Nevertheless, the sunset sky, however gorgeous in color, is the product of unchanging laws of the reflection and refraction of light, and our appreciation of it rests primarily upon our exercise of the faculty of seeing. Still, when the eye has done its work, and when the brain cells have coördinated the impressions to their final resolution, there is a wide interval between this operation and the sense of exhilaration which we experience in watching the changing colors, the shades of ineffable hue, and the suggestions of infinite glories, called up by the splendid spectacle. Here we come upon a

ground which as yet we cannot measure and define. The spectacle delights us, and we are glad. The delight somehow relates itself to an agreeable exercise of the sense of sight; but this inner something which the glorious vision calls up in the mind, or awakens in the fancy, is not to be accounted for upon materialistic grounds alone. Somehow, in a way as yet unanalyzed, the vision has touched the springs of feeling. *Why* it touched them, more than some other spectacle equally active upon the sense of sight, we cannot explain.

It is the same with music. After we have weighed and measured a Beethoven symphony, as to its tone lengths, its color, its successions of chords—measured and analyzed it with such accuracy that an imitation of it could be constructed upon scientific principles—there is an element of delight in hearing it, a movement of the feelings in listening to it, which the imitation would entirely miss. Here we come upon an evidence of subtle relations which elude our analysis. All that we can say is, that music has relations to feeling.

Certain composers have understood this relation, or more accurately, have had an intuition of it, in such clearness as to be able to address themselves to this higher faculty of musical apprehension. This has been the case with all the great composers. They have spoken, like the word of old, to “those who have ears to hear.” Now it is not possible to call up the ability of being affected in this higher way by music, in individuals who do not possess it. The most that can be done is to cultivate the more purely technical acts of hearing, on which a true apprehension of music depends, and to furnish them with an assortment of impressions derived from highly imaginative works by composers, who had this intuition, in the hope that later, when these qualities of musical discourse have had time to find their level within them, they will gradually come to a higher or deeper appreciation of music, and be moved by the feelings which the combinations of the tone poet were intended to awaken. This form of musical cultivation cannot be done rapidly.

In this connection it may not be amiss to call attention to the fact that American pupils, as compared with others, have a high degree of talent, even in these higher aspects. The nervously impressionable organization of the American girl, and her responsive muscular apparatus, enable her to seize and reproduce combinations which, according to all experience of European pedagogues, ought to be far beyond her for many years, if not forever. There is also in the American organization an instinctive appreciation of finish, as we see illustrated in our partiality for splendor, in our homes, railway carriages, and in all public places, far beyond that of any other country. This, also, is closely allied to the

activity of sense upon which art appreciation primarily rests. It can also be said for the American that he is the most imaginative of men, excepting possibly the German. This shows itself in his business conduct, his irrepressible taste for speculation, his ability to seize the future and discount it, as he is continually doing. This mental and nervous activity has only to be differently directed to give him a great advantage in art appreciation over other nations not so richly endowed with responsiveness to evanescent impressions of the kind we have been considering.

In such a nation, moreover, the production of good composers is only a question of time, and of no very long time at that. The quickness of apprehension which has enabled the American student to gain the commendation of his European masters, will presently exhibit itself in the production of tone poems, having in them a true transcript of our national life in all its amplitude and energy. Should such a form of art be created, it will not have to wait for recognition. In the nature of the case, music of this kind would appeal immediately to the American mind, with a directness and power impossible to music representing any other form of mind. There would be no need of protective societies, upon the trades union plan, for encouraging the consumption of this kind of music. Representing the national life, and the American fancy, it could not fail to find its public ready and willing to welcome it. Upon this larger scale, it would be only a question of a correspondence between these works and their environment. The same principle which induces the resonator to answer to a certain tone would operate here. The answer would be inevitable.

→ This rapid survey of the psychological relations of music would be incomplete without reference to the causes and the processes by which music has been developed to the commanding position of completeness in which we now find it. Upon this point it may be proper to say in the beginning, that the history of music plainly points to the fact that music has been developed in obedience to a twofold cause. There has been within man a desire for music and an apparatus outside him capable of stimulating and feeding this desire. Musical progress has kept step with the progressive improvement of musical apparatuses. As instruments have improved, music itself has improved. As music has improved, the emotions of delight in its exercise have become more and more complicated, and consequently have occupied the attention of the hearer more and more. It appears that the sensory apparatus itself has been greatly improved. The probabilities are that the exercise of following musical combinations has led to the establishment of habits of comparing impressions over a wider range than formerly, and this, again, has induced composers, who

always occupy the position of vanguard in the army of tones, to add new complications to their works. Without the desire for music, there would have been no instruments, no improvement in them, and none of these elaborate capacities for comparing and weighing one set of impressions over against another. Through the coöperation of both elements, the sensory apparatus has been improved in even step with the sound-producing apparatuses, and the capacity of the average man has followed after, with step somewhat slower, but still not far behind. This is not to say that man is the creature of the environment. For, while the environment has to furnish man with his material of thinking, his own personal environment is in great degree a matter of choice, according as he directs his attention to this, that, or the other element in it. Man is the creator of his own art, as well as of his civilization in all other respects. It is the desire of improvement which has to be accounted for, and which cannot be accounted for upon materialistic grounds. Why man, alone, of all animals, should have a capacity for self-education, is one of those questions which it would be futile to attempt to answer. It is quite certain, however, that this quality of perfectability is one of the most distinguishing traits of mankind, and in no province of his activity is it more strikingly illustrated than in that of fine art ; and among the fine arts, in none more strikingly than in that of music.

CHAPTER SEVENTH.

ON THE USE OF STUDIES IN PIANO TEACHING.

Some years ago it happened that, on my return from a summer vacation, I found a number of letters asking for a graded list of Studies for the Pianoforte. Within a few days more following, several other letters arrived, to the same purport. Then I said to myself that if this matter were of so much interest, I had better send to a number of the leading teachers of the piano and get their lists. Comparing these with each other would probably afford a clue to certain principles underlying the work of all, or nearly all, and, by printing the whole in a single article, those who had written me for information would be furnished the best that the market afforded. So much for preface, and so much for the origin of the following discussion.

The relative place of "studies" in a course of piano playing varies greatly with different teachers. Some, like Dr. William Mason, make comparatively little use of them, but do their work with technical exercises for the muscular part and with artistic pieces for the artistic part. My own practice has been of this kind for several years—in fact, for at least twelve. In many boarding-schools the pupils take one set of studies after another, so that in a whole year's study not more than half a dozen pieces are taken. At Oberlin, for example, the library contains a vast number of studies out of which the teachers are accustomed to select here and there a single one or two out of a book, for the modification of this, that, or the other peculiarity of playing. Therefore, before we can discuss this subject intelligently we must first consider the aim of the teaching as a whole.

Every piano teacher whose pupils develop qualities of artistic playing must administer the lessons with reference to the three following *desiderata* :—

1. To secure an accurate and comprehensive quality of study.
2. To develop technic; by which is meant the ability to play with the necessary certainty, rapidity and force.
3. To awaken and diversify the latent musical susceptibilities of the pupil.

These three elements enter into the playing at every stage, from the first beginning to the finish; therefore they must control the subject matter and the order of the instructions. The criteria by which we test the rank of an artist are these same three principles: fidelity to the composer, technical ability in carrying out his ideas, and musical feeling, making the performance fresh and vital. As the element last named is the one which is most commonly neglected, although it is the salt which saves the whole performance from emptiness and silliness, I will say a few words about it first.

The pupil's musical life is to be developed *from without* by hearing much music, and *from within* by *thinking* of much music. Therefore, where concerts are scarce, it is necessary to depend more and more upon the use of strongly imaginative music of the best composers. This I desire to have memorized and played by heart. In process of time a pupil comes to have within his mind a store of choice tone poems by Schumann, Chopin, Beethoven, Bach and smaller writers. These come up at intervals for review. New ones are added. The technic goes on by the exercises, which always form a part of the daily practice. In this way, in one instance, a pupil of mine had more than 160 pieces which she had played in public from memory, some of them thirty times. They included concertos, sonatas—in fact, a very satisfactory synopsis of standard pianoforte music by the very greatest composers, from Bach to Moszkowski. In another case a pupil had upward of 100 pieces, another sixty, etc. In all such cases there comes a time when the music appears to "*strike in*," if so inelegant an expression may be allowed. It becomes artistic in its conception. The playing takes on those innumerable gradations of accent and touch which serve to phrase and interpret the ideas of an author. It does this in the best possible way, namely, from within; the playing becomes the expression of a musical ideal existing in the pupil's own mind. I do not believe that it is possible to get this quality in its perfection in any other way than by this of memorizing, except in the rare cases of inherent intuitive musical genius. Even this is not so rare as it used to be, as the experience of every teacher will testify.

It is easy to see that this way of memorizing takes a great deal of time, though not so much as would be supposed. Like everything else, there is a knack to it—which removes the hardship when once the pupil catches it. By means of the memorizing, another of the chief ends specified above will be accomplished, which is the improvement of the quality of study. An accurate study is the indispensable prerequisite for artistic results. Unless the pupil is prepared to reproduce the *ipsissima*

verba (the exact literal words) of an author, it is of no use to talk about expression and interpretation. Artistic playing begins with the literal reproduction of every minute particular which the author has set down, as well as those which he has implied by means of his scanty marks of expression.

In choosing an ideal by which to criticise and modify the pupil's playing, one needs to bear in mind the course of development which music has gone through. The general direction of the progress has been from the merely clever and fluent contrapuntal and imitative work of Bach's predecessors to the clever and much more emotional and comprehensive musical discourse of Bach, and so on to the free fantasia of our own day. Under nearly everything of Bach's there is a concealed tide of feeling which is felt by intelligent hearers and players, and enables his pieces to cross over nearly two centuries and appeal to the ears and feelings of this generation as vigorously as they did to their own contemporaries. Nay, more : Bach had the germs of the entire subsequent development of music, and much that speaks to us in Chopin and Schumann is but the blossoming of buds from out the St. Thomas garden, at Leipsic. It is the inexhaustibility of Bach's purely musical fantasy, combined with the implied, even if not fully expressed, emotionality of most of his writings, that makes them so productive for study in these days. To anticipate a conclusion belonging later in this paper, the study of Bach is well-nigh equally productive in each of the three fundamental points specified above as the charter of music teaching. Still, to conclude that a pianist could be made by the study of Bach alone, would be a great mistake. His piano works do little or nothing for the delivery of a cantabile melody, nor do they generally require the depth and fullness of touch which modern virtuoso works expect.

Not to dwell so particularly upon subsequent composers, it will generally be conceded that the following are the more noticeable traits of their pianoforte music: Mozart introduced the *cantabile*. The study of his works conduces to smooth, musical and refined melody-playing. Beethoven is too great a poet to be abused by apprentice work. His thematic work and passages are covered by Cramer and Clementi, particularly the latter. His Adagios and Scherzos are best prepared (on the musical side, at least) by Mendelssohn and Schumann. Chopin, both as music thinker and pianist, forms a school by himself. The Bach style of sequencing with a given figure he introduced again, adding to it the myriad combinations of the diminished seventh and many new forms of finger work ; all these with a new development of sentimental melody, most delicately embroidered with *fioratura*, put upon the piano with an ample use of its

resources. The technical peculiarity of the Chopin treatment of the piano is found in his use of extended chords, more rapid use of extensions and separations of fingers (for which five-finger exercises form no preparation whatever), besides which, or with which, he always expects an expressive touch.

I am surprised that the technical importance of Schumann in the study of the piano has not found more acknowledgment in print. Schumann was one of the most spontaneously active music thinkers who ever wrote. His quickness of mind and his impatience of formal restraints—if, indeed, he ever fully realized any obligation to form—gave rise to a wholly new but delightfully valid method of developing periods by the freest kind of sequencing upon a leading motive. His harmonic treatment is bolder than any of his predecessors since Bach, his discourse singularly fresh and inspiring. Hence the effect of the study of Schumann is to quicken the musical perceptions more rapidly than the study of any other composer, provided the piece chosen be within reasonable reach of the pupil's state. Besides, the matter of expressive touch is to be mentioned, which Schumann requires to be so vigorous, so decisive, so delicately shaded, at times so tender, that nothing in the works of previous composers at all prepares for it, and, in fact, when the player *has* it, only the very best pianofortes are capable of responding with the proper artistic effect. The general course of this development of Music, as such, has been in the direction of sensationalism, the outward expression of a more excitable emotionality, which has operated in every possible direction. It has given greater rapidity, strange melodic and harmonic progressions, restless and sometimes morbid rhythms, extraordinary contrasts of power—in short, every possible musical manner of expressing strong, deep or tumultuous feeling. Beside this main current of musical development there have been numerous eddies and counter-currents, special provinces, in which congenial spirits have amused themselves while the world went on without them. Thus there is a vast literature of music pieces which are mere play. They sound prettily and amuse the lovers of the well-sounding. Such pieces are often useful in teaching, but we do not accomplish the abiding results of artistic playing by means of them. They are amusing and useful but not *formative*.

Alongside of the development of music thus sketched there has been an equal growth of piano playing in the same direction.

The modern development of extraordinary piano playing had its brilliant opening in the almost simultaneous appearance of Thalberg and Liszt. Thalberg was the inventor of the method of carrying a melody in the middle range of the keyboard and surrounding it with runs, arpeg-

gios, and other accompaniment covering the entire keyboard, the tones of the melody being prolonged to their necessary length by the use of the damper pedal. Thalberg played this sort of work beautifully, as no one since has done. The melody was delivered as *cantabile* as if he had only the melody to play. It is upon record concerning him that he studied singing for five years mainly for the purpose of being able to *sing* melodies with his fingers, as a good artist would sing them with the voice. This kind of accentuation of melody, coupled with light and very fluent runs and a discreet use of the pedal, constitutes the substance of the "Thalberg technic." Beyond writing a considerable number of fantasias in which this idea was applied to the more favorite melodies of the different operas, Thalberg added little to the literature of the pianoforte. His original compositions are musicianly but not poetic.

Liszt at once took up this notion of Thalberg's, and in many of his earlier fantasias—the "Rigoletto," for instance—he carried it out even better than the inventor himself, because he knew better where to branch off in some other direction. But in all of the earlier of Liszt's works we come now and then upon something which is played upon a different principle from anything in Thalberg's pieces. I refer to his cadenzas. The Liszt cadenza is a sensational passage, usually consisting of a simple sequence, carried upward or downward with increasing force until a climax is reached. Naturally, the progression downward affords the best opportunity for effect, because the volume of tone constantly increases in that direction. These things are played upon a different principle from that of any passages before them; they go faster and, at times, heavier, and have to be conceived by the player *en masse*, so to say. When the fingers have been taught the proper order of the motions by a sufficient number of slow repetitions, the passage has to be delivered "with the eyes shut," so to speak, or exactly as one runs when running for his life. This is the new principle of velocity as defined in Mason's "School of Velocity," of which I shall have a word to say under the head of technic. Soon, however, Liszt passed beyond the limited diversification of touch required by the Thalberg principle, and set himself to the translation of orchestral compositions and of Schubert and Schumann songs into the language of the pianoforte. In doing this he made more and more demands upon what I might call the "differential touch," *i. e.*, the ability to shade the touch in a variety of ways for the purpose of more clearly defining principal and subordinate ideas moving together. This demand upon technic in the later Liszt works is essentially the same as that in Schumann. Thus, at length, we arrive at the latest ingredient of piano playing, not yet recognized in most books of technic; namely, the technic of expressive touch.

Since Liszt, there has been no radical addition to piano playing. Tausig brought back something of the Bach legato and quiet fluency, which the Liszt works do not contain. Henselt worked out the pedal technic somewhat, and gained thereby a few effects not so fully gained by Liszt. But, substantially, the art of piano playing, as at present understood by the greatest artists, is included in the works of the following composers: Bach, Mozart, Mendelssohn, Clementi, Beethoven, Chopin, Schumann and Liszt. Or, to class them another way, according to their predominant influence, whether upon *Music* as such, or upon *Technic*, we have this: The great formative names in Music, as such, are Bach, Beethoven, Schumann, and Wagner. Mozart and Mendelssohn represent important special provinces. The composers who represent the progress of pianoforte technic (after Bach, who leads in both provinces), are Clementi, Chopin, Liszt. These three contain the whole of *pianoforte execution*, as distinguished from the music itself.

We are now nearly ready to define what we mean by the term "Etude" or "study." But first let us speak of "exercises." An exercise is a musical figure designed to be repeated many times in order to increase the obedience of the fingers. Such a passage may be planned for flexibility, separating the fingers, or other development of the latent aptitudes of the hand, or it may be for speed and endurance. When such a musical figure is developed into a rhythmic form (like Mason's accented scales), or repeated upward and downward in other keys (like the Tausig technics), it begins to have a part of the elements of musical interest; it is like saying over the word "Mesopotamia" in a succession of grades of pitch, or with a certain rhythm or accent, for the purpose of increasing the flexibility of the organs of speech. At the opposite end of the scale of expression from the exercise lies the tone poem or music piece, which is conceived solely from the artistic standpoint. A shade below the genuine "piece" comes the artistic "study"—a study in a particular effect—which, of course, would not be a "study" unless the effect were new, or unless, at the very least, the study carried it further or brought it out better than had been done before. The highest examples of this kind are the Chopin and Liszt studies, many of them being veritable poems—but always with a technical moral. The Heller studies belong to this class but in a lower grade, the poetry being less elevated and the phraseology simpler. From this high level studies shade off, by imperceptible gradations, to those of Czerny and Köhler, which have no musical value whatever. Köhler's especially are purely mechanical rhymes, which stand in music where versifications of the multiplication table or of the rules of grammar stand in poetry—mnemonic devices for

securing many repetitions of a difficult passage. It is like setting a bad speller an exercise to write in which his pet weakness is repeated a great number of times.

Besides the differences existing between studies in regard to their poetic value and their difficulty, their pedagogic value is much affected by the success or non-success of their authors in seizing the radical points of pianoforte technic. The studies of Czerny I have given up for several years, because I do not think them productive. They appear to me to be badly planned as exercises, and, also, in so far as they have value, to be directed toward the Mozart school of piano playing, which we have now passed far beyond. Cramer is another author whose name occurs upon nearly every list following, whom I regard as but little productive. This opinion, which I formed about twelve years ago, is countenanced by Von Bülow in the preface to his selection of the Cramer studies. They represent a small special province in piano playing ; they are not in the current of the great world stream.

Now, it is easy to see, from what I have said of the nature of piano studies, that they are likely to be more intellectual than emotional, and, therefore, especially well suited for improving the quality of the pupil's study. They do this within certain limits. The great end to reach in piano teaching is to make the playing sound fresh and spontaneous—as if the player were improvising. This can only be the case when the player's heart is in what he is playing, which, again, will not be the case unless there is heart in the subject matter itself. Therefore, the advantages of well-selected studies are seen in correct and even playing, but after a time, if too large a proportion of the daily practice is filled up with them, the playing tends to become meaningless, uninteresting, mechanical, and this will be more and more the case as the studies are chosen with prime regard to their bearing upon the muscular training.

Again, the selection of etudes will be influenced by the kind of exercises and pieces expected to be studied at the same time. Modern piano playing, and especially modern *brilliant* piano playing, requires more force, and makes use of more "stencil groups," or complex units, such as harmonic sequences, melodic sequences, passages, etc., than was the case in the old school. Not to consume time here with a discussion of the different "systems" for facilitating the acquisition of pianoforte technic, I will only say that I make use of Dr. William Mason's, for the following reasons :—

1. His "two-finger exercise," when properly used, is the only exhaustive school of expressive touch that I have ever seen.
2. His rhythmic treatment of scales and arpeggios strengthens the

sense of rhythm, and develops endurance better than any other mode of practice that I know of, especially in the earlier and intermediate stages.

3. His system of harmonic changes upon the chords of the diminished seventh is an exhaustive thesaurus of four-note arpeggios, besides conducing powerfully to harmonic perception and brilliancy of playing.

4. His octave school, as a sequel to the "two-finger exercise," covers the whole ground. Like Columbus' standing the egg on end, it is so easy as to be almost absurd.

5. The habitual practice of these "forms," or "passages," rhythmically developed out of melodic and harmonic germs, gives the pupil an unconscious mental exercise which facilitates memorizing (especially in the most difficult tasks of all—Chopin and Schumann) to such an extent that no one would believe it who had not seen it proven over and over again.

These opinions will naturally be disputed by a majority of the older teachers who read this paper. Nevertheless, with a reasonable knowledge of what modern piano playing requires, and after about sixteen years' experience in applying these exercises, I stand by them; and so will any teacher who appreciates coming rapidly to the root of things.

There are many sets of technical exercises which will do the greater part of the work. All but Mason's, as I think, fail to provide a school of expressive touch, which, therefore, has to be otherwise provided by the use of pieces. And with all exercises, studies and pieces, *everything depends upon how you use them*. The short road to technical excellence upon the piano has yet to be discovered. It is proper to add, moreover, that all technical devices may be judged by any teacher caring to pay sufficient attention to them, according to the three following principles:—

1. That they secure satisfactory tonal results, *i. e.*, make the piano sound well.

2. That they apply the force upon sound mechanical principles, the hand and arm being machines for the conversion of force.

3. That the hand *looks well* when used as required by the exercises in question. It will be found that these three ends go together: The well-sounding, the well-looking, and the mechanically correct. Any system of technics whatever can be judged by the application of these three tests.

That distinguished artiste, Mme. Carreño has favored me with the following account of her own training, the thoroughness of which stands

in striking contrast with the character of original genius, which is such a prominent trait of her public performances. She says :—

"I would very much like to answer in a satisfactory manner the circular you so kindly enclosed, but as 'the best method,' to my mind, 'of practicing the piano' has never been published (which was the one my father employed with me) I fear my answer will be of little use. I think Bertini's method, taking it all through from his first book to his "Etudes Artistiques," followed, or rather intermingled, when the pupil is sufficiently under control of a certain amount of technique, with Czerny's 'Velocity Studies,' and then by Cramer, Clementi, Henselt, and crowning it all with Chopin's Etudes—this, to my mind, so far as studies go, is the best way of stepping up the ladder; and this is how I have studied myself, and I have taught upon the same plan. When a pupil is far enough advanced to take Clementi, I always give them at the same time Bach's easier Preludes and Fugues, taking by degrees the more difficult ones. To make the work easier and quicker, my father wrote 500 exercises, which I had to do every day for a year, comprising all the scales, arpeggios, trills, thirds, octaves, etc., etc., and difficult passages out of all the different works of the composers he knew—and they were not few! And these I had to do every day, as I say, each day in a different key, both major and minor; and when I had finished all the twenty-four modes, I had to begin and do it all over again, and so on, I suppose, until the end of my life. I had to do all these the whole length of the keyboard, in four or five different touches, including staccato. As you can well imagine, when the time came to take up the studies, my execution had reached such a point that the controlling of the difficulties in these was a matter of comparative ease and of very quick work. To this day, I do my practicing, beginning always with two hours of these exercises of my father's, which, of course, I have had to reduce to a certain limit in order to be able to do the remainder of my work. I do not know whether this long answer to your very short question will be of any use. At least you must take the will for the deed," etc., etc.

The following letter from the distinguished artist and teacher, Mr. William H. Sherwood, approaches the subject from yet a different standpoint. He says :—

BOSTON, 611 WASHINGTON ST., Nov. 16th, 1884.

I could not find time to answer you earlier. My first choice for a piano instruction book is not in print, for the reason that no existing works I have seen treat thoroughly of the most necessary first principles of training arm, wrist and fingers, the muscular and nervous anatomy, in a comprehensive, safe and productive manner. Consequently, nearly all piano players *start wrong!* They are not made to concentrate mind and will internally on the inner sensibility of the muscular and nervous parts, the relation of upper and lower arms, forearm and wrist, of varied and valuable wrist training, whereby the hand and fingers can be placed and carried about to the best advantage, of cultivating the powers of holding up or sustaining the forearm and fingers, of a separate science for movements from right to left (independent of those up and down), independence of the various muscular parts, discriminating accurately between them, etc., etc.

Dr. William Mason's "Pianoforte Technics," Ehrlich (in pamphlet on Tausig Ex.), and Kullak (octave studies) have thrown some glimpses on these subjects in several respects.

The "Technicon" and the *writings of its inventor* will throw a great deal more. My this year's article in the Music Teacher's National Asso. Report and my article last June, in the "Keynote," are intended to lead in the same direction. I repeat that we need an instruction book which shall treat of the

powers of sustaining (that means "holding up") and cultivation of the relations between the *upper* and *lower* arm, new and almost unknown functions of the wrist, of subdued strong parts and assisted weak parts, the science of right and left progressions, of learning to discriminate between flexibility and firmness, and all this, before we talk of notes, or of études and music. If I live a few months longer I propose to bring out such a book. Meanwhile, look up the "Technicon." After that we want staccato and wrist exercises *first* in order. After Kullak's octaves receives some preliminary addition to the preparatory method it will do. Neupert's octave studies are interesting. Alois Schmitt's five-finger exercises, Dr. Mason's technical studies, Arthur Mees' eight daily studies, Wieck's exercises in touch, Haberbier's Exercises, La Couppey's fifty virtuosity Exercises, Anton Streletschi's Exercises, are good. If a pupil has Cramer, Clementi, Bertini, etc., I can generally use them. A favorite book of instruction with me is Bach's Well-Tempered Clavichord, also other writings of said Bach. Other favorite studies are the works of Beethoven, Händel, Mozart (limited Mendelssohn, ditto), Chopin études, and other obscure writings of men like Schubert, Schumann, Liszt, etc. Thälberg and Henselt should be studied for pure piano style. I have great need of works like "Mathews' Phrasing," and "How to Understand Music," and other theoretical apparatus to make the above-named works intelligible to students. We need to call the results of scientific minds and fresh brains into our piano instructions. The Berlin authorities are after our senseless methods very hard.

Cordially your friend,

WILLIAM H. SHERWOOD.

The levity of the latter part of this letter led me to think that it was one of Sherwood's *fantasias, pour s'amuser*, and not intended to be taken seriously. Thereupon I wrote to him again, asking for a serious letter; in answer to which I got this:—

611 WASHINGTON ST., BOSTON, Nov. 25th, 1884.

MY DEAR MR. MATHEWS:—

I have no special progressive list of studies. When a pupil first comes to me I try to teach him to *think* and discriminate between the different movements of arm, wrist and fingers, using *any* simple exercise. What I give him to study afterward depends entirely upon his former training and his capacity. I wish you would use some of the letter I wrote you, in your article. I am going to write something on the subject when I get time. The "Technicon" is a new machine for developing and strengthening the muscles of the hand and arm and for various other good things.

It will do away with a great deal of the tiresome practice we all have to do. The inventor is a friend to Dr. Von Bülow and is a wonderfully intelligent man. He must send you one of his pamphlets. I am just in the midst of some recitals here and am very busy.

Very cordially yours,

W. H. SHERWOOD.

These letters of Sherwood's, together with an immediately following opportunity of hearing Mr. Joseffy in three recitals, led me to observe a point upon which the books generally are silent; I mean the extension of modern pianoforte technic. Fifty years ago the elementary study of the pianoforte was mostly devoted to the practice of what were called "five-finger exercises." The most famous collection was that of Aloise Schmitt; they may still be found in Richardson's "New Method for the

Pianoforte." These exercises, whether for single notes or for a holding note with moving accompaniment, undertook to make each finger a hammer, moving freely at the metacarpal joint, but not moving at any other joint. The ideal was that of a stationary hand, with five moving hammers, and no soul in it anywhere. Dreysschock, whose scale forms are those in Richardson's "Modern School," gave more attention to scales, as also did Thalberg. Especial attention to the wrist is a matter of our own day, almost; for although the venerable Fr. Wieck taught a loose wrist as the beginning of a musical touch, the technical means for securing it were not well supplied until Kullak had written his octave school and Mason discovered the "two-finger exercise." Nevertheless, I have often found out by experiment, that a pupil may do all these things well, yet fail in certain pieces of Liszt and Henselt, or even in the much lighter ones of Joseffy. The missing link is the technic of arm—the ability to carry the hand lightly and certainly from one part of the keyboard to another.

Sherwood, it will be seen, proposes to cultivate these arm motions before those of the fingers, upon the theory, probably, that unless the arm is prepared to support the hand, the fingers will have no fulcrum to work upon. This new insight I shall not undertake to pursue further at this time. I think there may be something in it, but the necessary experiments have not yet been made for determining exactly how much, or whether, indeed, the traditional order of proceeding can be so far modified without breaking the chain of evolution which has brought us from Scarlatti to Liszt and Joseffy. This much, at least, is sure: The Mason two-finger exercise introduces a hand rebounding from the keyboard upon a loose wrist, at the second or third lesson of a beginner; and it is found that this results in strengthening and equalizing the fingers more rapidly than can be done with any kind of five-finger exercise. Whether the process can be carried further with equally improved results, as Sherwood indicates, we have yet to find out.

Dr. William Mason gives the following outline of his ideas upon the selection and use of studies; as will be seen, it is in striking illustration of the positions taken in the earlier parts of this article: His letter is dated Orange, N. J., October 27th, 1884:—

My DEAR MR. MATHEWS:—

Your letter of the 23d inst. has just been received. It is impossible for me to give you off-hand a list of the ten best and most indispensable books of Piano-forte Studies, arranged in progressive order. You know that I have relied mainly on my system of technics for strengthening and developing the muscles used in playing, and I have used the so-called studies and etudes merely incidentally and for special purposes adapted to individual cases. The following

list will give you some idea, although it is by no means complete, but is perhaps not without progressive order, viz. :—

Behrens' Newest School of Velocity, Op. 64, Nos. 1 and 2; especially No. 1.
Moscheles' Studies. Rather a long step here!

Cramer, Studies.

Clementi, *Gradus ad Parnassum*.

Heller, Selections.

Chopin, Etudes.

Henselt, Studies.

Bach, Inventions and Well-Tempered Clavier. (Perhaps these ought to come in directly after Clementi.)

Liszt, Rubinstein, and miscellaneous authors.

Summary.

CLEMENTI—BACH—CHOPIN.

These three, I should say, are indispensable to any one who aspires to an all comprehensive technique, ancient and modern. Other works, of course, are of great value, and must be selected with good judgment, and with a view to the particular and individual necessities of each student. As a rule, it seems to me that too much time is given to mere technics or finger gymnastics and exercises. These, of course, have their proper use, but they should be employed with great temperance and moderation. Little by little, day after day, with great care and persistence, but not in a hurry for results, and plenty of time and slow development in the beginning, will produce the grandest results after a while and in the end. A student who has good judgment will learn how to utilize for purposes of teaching all sorts of passages in the various compositions which they study, be these composers Beethoven, Schumann, or any other great composers. But pupils should play their technics and exercises with expression, and give them a soul, as well as pieces. Do not spend all the time on dead things. If you do not know the book of studies by Behrens, look at them. They are interesting and useful; are musical and sound well. Each study is only a page in length. They are easy and for young people.

In the same line of moderation in the use of etudes was the answer of Prof. John C. Fillmore, author of the "Short History of Pianoforte Music." He says :—

"To be honest about it, I use very few studies except Mason's "Technics" and Mathews' "Phrasing." I am using one copy of Loeschhorn's Op. 67, Book I. It is valuable, and so is the Op. 66. I now and then use a Tausig's Clementi "Gradus," but seldom get through. For advanced cases I use Chopin's Studies, of course. Skipping about, I use a good many of the Bach "Inventions" and some of the "Well Tempered Clavier." I have not used Czerny, Köhler or Cramer for a long while."

Mme. Neilson-Rounseville, a pupil of Haberbier, and one of the most careful teachers of solid technic in Chicago, has named the following as the books of studies which she most relies upon :—

"Loeschhorn," Ops. 65, 66 and 67; Haberbier "Daily Studies;" "Finger Gymnastics;" "Preludes" and "Poetical Studies;" Mathews' "Phrasing;" Czerny's "Velocity," Book I; Heller, Ops. 45, 46 and 47; Bach, "Inventions" and "Well-Tempered Clavier;" Cramer Op. 100; "25 Studies" and "50 Studies," edited by Von Bülow; Chopin, Ops. 10 and 25; Kullak, Op. 48; Clementi, "Gradus."

She uses selections of all these, and requires "every selection to be memorized and practiced until it can be played with good technic and just expression, exactly like a concert performance." This stipulation shows that she not only uses the studies for improving the quality of the pupil's study and the technic, but also for imparting a melodic character to the playing, and for making it musical.

Professor Calvin B. Cady, of Michigan University, one of the most thoughtful musicians and teachers in this country, names the following list :—

ANN ARBOR, MICH., Nov. 17th, 1884.

In the first place, if I had students that I could deal with according to my desire, and not according to the necessities of the case, I should not touch études very early. Secondly, I doubt whether one can say that any études except the Chopin are *indispensable*. Thirdly, the following have been of practical value. Of course, I only use selections from any one opus.

Gurlitt, Op. 83.

Köhler, Op. 50.

Gurlitt, Ops. 50, 51 and 52.

Heller, Op. 125. Rhythmic Studies.

Schmitt, Op. 114, Books 1 and 2.

Heller, Ops. 47 and 45.

Gurlitt, Op. 80. Rhythmic Studies.

Schmitt, Op. 16.

Czerny, Op. 299 and 740.

Cramer, Moscheles, Op. 70.

Clementi, Gradus.

Haberbier, Op. 53.

Grund.

Chopin.

There is my pile for general use, but, of course, I often go outside for special purpose.

Mr. Frederic Grant Gleason, a pupil of Kullak, names the following :—

CHICAGO, November 20, 1884.

In response to your note requesting a list of what I consider the most valuable studies for the piano, I submit the following :—

I. Clementi's Gradus ad Parnassum (Tausig's).

II. Cramer, Etudes (Bülow's).

III. Loeschhorn, op. 66, 3 books.

IV. Loeschhorn, op. 38, 3 books (for phrasing).

V. Chopin, Etudes, op. 10 (Bach inventions, suites, etc.).

VI. Heller's Studies in Phrasing.

VII. Behrens, "Velocity."

VIII. Czerny, "Velocity."

IX. Czerny, Daily Studies.

X. Tausig, Daily Studies.

XI. Felix Le Couppey, 25 Etudes (particularly useful for small hands).

I have found it very difficult to make a selection from the many études which I am accustomed to use, and have not been able to suit myself with a scheme which should present the études in what I consider the order of usefulness.

For example, the Cramer études I use more frequently than those of Clementi, and the op. 66 of Loeschhorn more frequently than either. On the whole,

the Cramer etudes seem to me to be the "most indispensable," as filling a place that could be filled by *nothing else*, though the same condition is fulfilled by the Chopin Etudes, especially as regards the more modern school of advanced piano playing. Yet as Cramer must precede Chopin, and is useful to many who do not attain to sufficient mastery of the pianoforte to require Chopin, I should give them the preference as regards usefulness.

The etudes by Felix Le Couppey, Professor in the Paris Conservatory, I have found very useful for small hands—also Behrens' op. 79, Duvernoy's "Ecole de Mecanisme," etc. Many works that are not strictly etudes are adapted to peculiar cases, and may take the place of etudes, as Bach's Inventions, Suites and many Sonatas of Dussek, Clementi and Hummel.

The Tausig Daily Studies require so much musical perception to carry out the transpositions indicated, that with some pupils they are not available.

As music they do not possess a very great interest, not enough in many instances to detract from their mechanical value as technical studies.

The Cramer Etudes I frequently have transposed into different keys—often with the *same fingering*, the latter being one of the things I was myself obliged to do when studying the Tausig method in Berlin.

Yours very truly,

FREDERICK GRANT GLEASON.

Mr. Emil Liebling, also a pupil of Kullak and one of the most brilliant pianists in the West, names the following list:—

CHICAGO, November 11th, 1884.

MR. W. S. B. MATHEWS:—

Dear Sir:—The following progressive List of Studies may be found useful:—

Grade I.	{ Selections from Koehler, Preparatory Studies. " " Loeschhorn, op. 65. " " Bertini, op. 100.
	{ Selections from Doering, op. 8. " " Krause, op. 2 and 9. " " Loeschhorn, op. 66.
	" " Heller, 45, 46 and 47. " " Bertini, op. 29.
Grade II.	{ Selections from Bertini, op. 32. " " Cramer, Studies. " " Jensen, op. 33.
	" " Clementi's Gradus.
	{ Selections from Moscheles, op. 70 and 95. " " Henselt, op. 2 and 5.
Grade III.	{ Selections from Thalberg, Studies. " " Chopin, " " " Liszt, " " " Rubinstein, "
	" " Chopin, " " " Liszt, " " " Rubinstein, "
	" " Chopin, " " " Liszt, " " " Rubinstein, "
Grade IV.	{ Selections from Moscheles, op. 70 and 95. " " Henselt, op. 2 and 5.
	{ Selections from Thalberg, Studies. " " Chopin, " " " Liszt, " " " Rubinstein, "
	" " Chopin, " " " Liszt, " " " Rubinstein, "
Grade V.	{ Selections from Thalberg, Studies. " " Chopin, " " " Liszt, " " " Rubinstein, "
	" " Chopin, " " " Liszt, " " " Rubinstein, "
	" " Chopin, " " " Liszt, " " " Rubinstein, "

A Bach course: Kleine Präludien, Inventions, French Suites, English Suites, Well tempered Clavichord, Four Toccatas, Italian Concerto, Chromatic Fantasia and Fugue, Organ Fugues arr. by Liszt and Tausig.

For special technical work: Plaidy's Piano Technics, Loeschhorn's Piano Technics, Merkel's Piano Technics, Tausig's Piano Technics, Kullak's Octave Studies.

Very Respectfully,

EMIL LIEBLING.

Mr. B. J. Lang, the distinguished pianist and conductor, of Boston, gives the following, as, in his opinion, embracing the most essential elements of pianoforte instruction :—

Here is a list of what I am in the habit of using for studies :—

Heller's Studies.

Cramer (Bülow's edition).

Clementi, "Gradus," *not* edited by Tausig.

Bach, two-part Inventions, and Well-tempered Clavichord.

Chopin, Preludes.

Schumann, opus. 3, and op. 10.

Chopin, Studies.

Henselt, Studies.

Heller ought never to be forgotten, but he belongs to the poetical-musical side.

Dr. Louis Maas, also of Boston, gives the following :—

DEAR MR. MATHEWS :—

The principal Studies that I use, progressively arranged, are the following :—

Bertini, Op. 29, 32.

Czerny, Velocity, 3 books.

Köhler, New School of Velocity.

Heller, Op. 45, 46, 47.

Cramer, Original Edition, 4 books.

Czerny, Op. 818, 50 Studies.

Jensen, Op. 32, 3 books.

Czerny, Op. 740, 5 books.

Moscheles, Op. 70, 24 Studies.

Köhler, Op. 128, 12 Special Studies.

Chopin, Studies.

Czerny, Schule des Virtuosen.

You can use my name with these. Kindest greetings.

Mme. Rivé-King, the well-known pianist, sends the following account of her ideas upon this subject :—

In reply to your inquiry "what ten, or more, books of studies I consider INDISPENSABLE," I beg to say that I am not acquainted with any particular book, or set of studies, that, in my judgment, would be "indispensable." There are a great many excellent studies. For my own personal technical practice I do not use any studies; I find that the wide range of my concert and recital repertoire is sufficient to keep my technic up to the required standard. My own experience in teaching is so confined to Phrasing, cultivation of touch, and artistic finish, that I use the Chopin and Liszt etudes, and the Tausig Daily Studies, together with a few of my own. Should I, through illness or other cause, lose several weeks' practice, I can soon bring my technic up to its usual smoothness and flexibility by the practice of playing Bach's Fugues. Almost every pianist and teacher has written either an instruction book or a set of studies, and many of them are really valuable. Among the many instruction books, that of Dr. William Mason is, in my opinion, one of the best. The studies written by Mr. Anton Streletzski, and Mr. Carlyle Petersilea, deserve high praise, and as a help to overcoming certain technical difficulties they will be found especially valuable, to those whose technic is not far enough advanced to use the studies of Chopin, Liszt, or Tausig.

Very sincerely yours,

JULIA RIVÉ-KING.

I also sent letters to several other teachers, among whom was Mr. Ledochowski, of Chicago, who prescribed the following course:—

- Lebhert and Stark's first Book.
- Loeschhorn, op 66.
- Czerny, op 740.
- Bach, Preludes and Inventions.
- Cramer's Studies, Bülow's edition.
- Clementi, Tausig's edition.
- Bach, Italian Concerto.
- Chopin, Studies, op 10.
- Bach, Well Tempered Clavichord.
- Henselt, Studies.

A careful study of these lists and letters by eminent teachers confirms the opinion expressed by Dr. Mason, which, also, I had already deduced from my own experience. It is that while the literature of the pianoforte contains a vast number of études by different composers, only a very few of them are, in reality, so vital and formative that we cannot do without them. Bach, for careful study, and for the acquisition of *voice*-playing (as distinguished from *chord*-playing), and for musical intelligence; Clementi and Scarlatti (the latter in very small amount) for classical virtuosity; Heller and the Mendelssohn "Songs Without Words," and a little Mozart for expressive playing of melodies; Loeschhorn's Op. 66 for "forming the execution"; Chopin, Schumann and Liszt for the modern school of fluent, expressive and brilliant concert playing. Each of these, at the proper time, we must have. Everything else is a matter of taste. No strictly progressive arrangement is possible, beyond a very loose and general one; for in different cases we might at one time desire first to improve the melody playing; at another the execution; at another chord-playing, etc., each of which would vary the order. Yet if one were to divide the whole period of pianoforte instruction into three great divisions, the elementary, intermediate and advanced, the selections would be such as these:—

Elementary.—Technics, Loeschhorn Op. 65 and 66, Bks. I and II; Mathews' Phrasing (which contains the best pieces in Heller's Op. 46 and 47, as well as a part of Schumann's "Kinderscenen"); perhaps some of Haberbier and Behren's velocity.

Intermediate.—Bach's inventions, selections from the "Bach Album" in the Peters Edition. Selections from Mendelssohn's "Songs Without Words," Nos. 1, 3, 4, 6, 8, 18, 30 and 27. Chopin's Nocturne in E flat, Op. 9; Impromptu in A flat, Waltz in D flat and Nocturne in F minor. Schumann's Phantasie Pieces, Op. 12, Nos. 3, 4, 2, 7 and 8; also Romance in F sharp. Bach's Preludes and Fugues in C minor, F major, G minor and C sharp major in "Well-Tempered Clavier." A

few pleasing pieces by Raff, Mason and Rubinstein. Possibly such a sonata as Beethoven's 1st, in F minor or C minor, Op. 10.

Advanced.—More Bach, a little Clementi, Chopin's Studies, beginning with No. 8, Nos. 12, 5, 1, 2, 3. Schumann Novellettes in E and F; "Etudes Symphoniques." Some of the Liszt-Schubert songs; also Liszt's "Rigoletto," "Tannhauser," "Spinnerlied," etc. By this time the pupil is able to study almost anything he desires or that the teacher chooses.

If in all this course the rule of Mme. Nielsen-Rounsville be observed, to have every piece and study memorized and practiced, sooner or later, until it can be played like a concert performance, it is quite certain that the playing will take on a character of flexibility and of ready responsiveness to the will and sensibility which was unknown to the playing of the old school, and impossible to be obtained in these times, also, so long as the greater part of the time is spent in the study of meaningless combinations of tone-forms, having only a mechanical intention.

With a view of bringing out the remarkable agreements of these lists, in regard to the usefulness of certain ones of these sets of studies, concerning which nearly all the writers are unanimous, I had intended to tabulate them. But upon completing the task, I discovered that it amounted to little more than a repetition of the names of Heller, Cramer, Loeschhorn, Czerny, Clementi, Chopin and Henselt. The Tausig so-called "daily studies" are exercises and not studies in the meaning of the present discussion. We have to do here with studies having, at least, a color of artistic form, to which the Tausig daily studies make no pretension.

This discussion would be incomplete if it failed to mention the application of certain pieces to purposes of study. I refer to such finger pieces as Weber's "Perpetual Motion" rondo in C, Raff's "La Fileuse," etc. These pieces have the merit of making unusual technical demands upon the player, in requiring a long series of finger touches in uniform rapidity, and at too high a degree of speed to be thought of each for itself as it occurs. They are played in part automatically, after being prepared by a large number of repetitions in perfectly correct order. Pieces of this kind are more useful than exercises pure and simple, because the effect, when it is properly mastered, is so much more interesting than anything to be found in studies proper, as to reward the pupil for the countless number of repetitions necessary for playing them properly. It will be found possible, therefore, to secure a good quality of practice upon something of this sort, at a time when the pupil is not in a fit state to concentrate attention upon a task not having a reward somewhere

in it for the musical feelings, properly so-called, or, at least, for the feelings of pride in good playing. But to enter into a discussion of piano teaching upon this side, would take us too far. Enough to place upon record here the suggestion, that there is no piece having in it combinations worth making, and of such complexity as not to be performed by the pupil at first trial, but what at one time or another in the development might prove of value as a study ; and it will also be found, in general, that studies increase in usefulness just in proportion to their having in them the possibility of serving as pieces after they have been mastered as exercises. The converse of this is not true, however, that pieces are worthless for use in study unless they require a large amount of practice to master them. The development of a musical style of playing makes it necessary that a considerable part of the playing be spent upon pieces in which the music is the main thing ; music of such a quality that it lies within easy reach of the pupil's musical consciousness as it then exists.

The entire discussion needs to be supplemented with the following aphorism which the young teacher will do well never to lose sight of. It is :—

"Piano playing is mainly a matter of the mind, and not primarily of the muscles, and this is more and more the case the higher one goes in it." While merely muscular preparation requires considerable attention, the greatest proportion of the time is wasted in harping upon muscular and mechanical relations, when the hindrance to elegant playing exists in the mind—in the musical consciousness of the pupil or student. Those who fail to play effectively after study, do so, nine times out of ten, from *mental* reasons, and not from muscular reasons. Therefore, the more you can do for the pupil's musical sensitiveness, and the more you can help him to think his music as musicians think it, the easier you will find it to make him play in a manner to please every one who hears him.

CHAPTER EIGHTH.

THE TONAL SYSTEM AND TEMPERAMENT HISTORICALLY AND MATHEMATICALLY CONSIDERED.

The selection of certain gradations of pitch as forming of right the musical scale, is, in nature, somewhat arbitrary. It is not true, as many writers appear to suppose, that nature has given us a musical scale toward which all the different scales in practical use more or less successful are approximations. On the contrary, nature gives us an infinite number of gradations of pitch, separated from each other by almost imperceptible differences; shading into each other as undefinably as the shades of color; and no standard or basal tone anywhere, but always and everywhere a multitude of pitches, intermingling, clashing, combining and substituting for each other, in a manner apparently inextricable. Nor is it true that nature affords us a set of ratios which tones must bear to each other in order to be susceptible of reduction to the kind of common denominator ordinarily known as tonal unity. The earlier instruments were either of inconstant pitch, like all the early stringed instruments, in fact, we might almost say *all* stringed instruments, or of scales fixed and unsusceptible of modification, like the flutes and trumpet. Whatever diapason was established probably became so through accidental discovery of its convenience for the average range of voices of a particular province or climate, and through the copying of one flute or trumpet after another. Nevertheless, it is curious to observe that in all scales of which we have any sure knowledge there has been an approximation toward order and relation not widely differing from that of our present musical scale. Moreover, this approximation has been progressive in its character, measured chronologically, down to the present time, saving, of course, occasional lapses of here and there a century when civilization encountered one of its many backward eddies.

HISTORICAL.

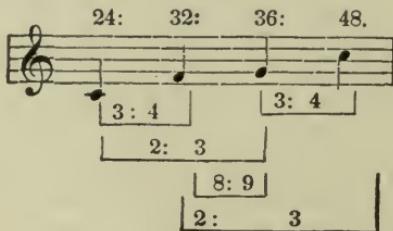
Most likely the earliest attempts at ascertaining the true place and relation of the component tones of the musical scale was made by the Chinese. According to the accounts of their own writers, this was done

as far back as 1500, B. C., or some time before the priestly harpers in the tomb of Rameses IV had acquired the beautiful instruments which they are represented as playing.

The earliest attempt at ascertaining the exact relation of the tones of the musical scale in the west, of which any record has reached us, was made by Pythagoras, about 600 B. C. We do not certainly know whether he was aware of the fact that sound consisted of vibrations, or whether his numeric ratios of the leading consonances were merely proportions of weight or length, necessary for adjusting two similar strings to these relations. At all events, he is credited with having experimented with strings and weights, thus discovering that two strings of equal length and size produced the octave when the weights by which their tension was maintained were in the relation of $2 : 1$. He also found that the half of a string produced an octave of the fundamental tone. In the same manner he discovered that the proportions of the perfect fifth were $3 : 2$, and the fourth, $4 : 3$. He had thus divided the compass of the octave into two parts, one measuring a perfect fifth, the other a perfect fourth—as e. g., C F C, or C G C.

When he computed the fifth upward from the lower tone he had the succession C G C; when he computed the fifth downward from the upper tone he had the succession C F C.

Thus he ascertained theoretically the place and ratios of four tones in the scale. Example:—



By comparing his ratios he also ascertained the ratio of a whole step, as between F and G in the above example. This he made $8 : 9$, which was correct. Up to this point the ratios of Pythagoras correspond with modern ideas; but here his sagacity failed him. He tried, in a variety of ways, to ascertain the true place of the tones of the scale falling between these, but never with success. The octave, as thus divided, consists of two perfect fourths, "disjunct" from each other, as the Greeks called it. That is to say, from C to F is a fourth, as also from G to C; between F and G is a whole step. This remained the theoretical pattern of the Greek scale for several centuries, all the modifications being made upon

the tones standing between these fixed points. Pythagoras made many attempts at solving this problem upon satisfactory grounds. For example, he attempted to deduce the place of the third by tuning four fifths from C and reducing them within the octave. Thus :—



The E thus reached is related to the tonic C in the ratio 81 : 64, which long remained the presumed standard of the interval of a major third. By a similar process of deduction, he endeavored to fix the place of the second tone, namely, by subtracting two whole tones from the upper tone of the tetrachord ; and again by subtracting a tone and a semitone. These results did not agree with each other, nor with the determination of the interval of the third. It was, perhaps, due to the inconclusive inductions of Pythagoras, that Greek music owed its elaborate and slippery genera of musical scales, its so-called "diatonic," "chromatic," and "enharmonic" modes. As the unfailing instrument of Greek musical culture was the cithara of from four to seven tones, which, moreover, lacked tuning pins for adjusting the intonation accurately, as well as a standard of intonation or diapason for the key note, it is evident that the fine speculations of Pythagoras must necessarily have remained barren idealities, and this there is every reason to believe they did.

The true ratio of the major third was discovered by Ptolemy, the Alexandrian astronomer, and confirmed by Euclid the mathematician, both classing it as a dissonance. Along with these they found also the major and minor sixth, by taking a minor and a major third respectively, from the octave. The thirds were major, 5 : 4 ; minor, 6 : 5 ; the major sixth, 5 : 3 ; the minor, 8 : 5. Thus they had all the ingredients of an enjoyable harmony of pure major and minor chords, if they had known how to combine them ; but this was not to be for many centuries later. By the close of the Alexandrian schools, the following places within the octave had been mathematically determined.



These tones were capable of forming among themselves, by different presentations, the consonances following :—

Minor Third 6: 5. Major 3rds 5: 4. Perfect Fourths. 4: 3.

Per. Fifths 3: 2. Minor 6ths 8: 5. Major 6ths 5: 3. Octave 2: 1.

Nevertheless, this comparatively liberal provision of melodic and harmonic resources remained unfruitful in practice for want of instruments capable of producing them in a form available as material for the composer; for we must not forget that all these relations had been deduced mathematically, and demonstrated only by means of the divisions of a monochord; this was a single string, provided with a movable bridge, which being placed at this, that or the other point of the sounding length of the string divided it into segments, thereby producing two complementary intervals, making up an octave. But neither then, nor for some time later, were there instruments of music in use affording more than a limited selection of these intervals, nor these with anything approaching the accuracy of adjustment or the amplitude of vibration necessary for serving the ears of a practical musician with the necessary material of sense-incitation.

Ptolemy has been credited with having introduced the prime number 5 among the musical ratios, which, like his predecessors, he regarded as dissonant. This fact is conclusive in regard to the use of triads at that time. If he and his predecessors had been in the habit of hearing triads they could not have regarded the major third as dissonant. Moreover, the full account of Ptolemy's various divisions of the tetrachord shows that he hit upon the major third accidentally, as a single ratio among many arrived at in the attempt to discover as many new methods of dividing the tetrachord as possible. (See table D, p. 156.) The same limitation is to be applied to the credit assigned him by M. Fétis, in his Universal Biography of Musicians, of having determined the correct order of the major and minor steps in the major scale, as given in his "diatonic intense" of Table D. This form appears merely as one among many. In so far as anything is to be inferred from the nomenclature, he may have regarded the "equable" as the best method of all—a method impossible in a scale determined according to a true tonality. The same inference of Greek ignorance of a correct division of the octave appears in Euclid's directions for the division of the tetrachord, or "Section of the Canon," as it was called.

A paraphrase of Euclid's "Section of the Canon" may be found in the "Exercises" of the late Col. Perronet Thompson, at one time owner of the *Westminster Review*, in which his essays upon "Enharmonic Music" originally appeared. See vol. II, p. 103. The following is his method:—

Dividing the string into four equal parts, he obtains the fourth by taking three of those parts; the octave he obtains by taking two; the double octave he gets from one of these parts. Dividing in half the portion of the whole string producing the fourth, he gets the fourth of the second octave. Dividing the original string into *three* parts, by sounding one of them he gets the fifth of the second octave; doubling this, he gets the fifth of the main octave; taking a third of this latter, he gets the major ninth; doubling this he gets the octave below. These sounds he calls "established," or sounds that never change. Dividing the length of string producing the double octave into eight equal parts, he adds one, thus getting a great step below the double octave. Adding an eighth to this length of string again, he gets a flat sixth of the second octave, two great steps below the octave, etc. In putting two great steps in succession ($\frac{9}{8}$) in the scale, Euclid demonstrated conclusively his limitations, for such a succession never takes place in rational music. In fact, the more we study these theories of Ptolemy and Euclid the more forcibly we are impelled to conclude that they were purely speculative, and far in advance of the practices of musicians then and for centuries later.

By a curious oversight of history, neither of these determinations of Ptolemy or Euclid came to anything for many centuries. When Greek musical theory was revived, about the sixth, seventh and eighth of the Christian centuries, it was the Pythagorean doctrine of music that was taken up. Nothing was known of these theories of Ptolemy, or if known, no attention was given them until the time of Zarlino, the Italian theorist, who, in 1558, published his epoch-marking work, "Instituzioni Harmoniche;" and in 1571 his "Dimostrazioni Harmoniche," in which he took again the theories of Ptolemy and demonstrated their soundness, adding to them his own better insight in calling the thirds and sixths consonances. Zarlino was the first theorist maintaining that thirds were consonant. Thus, while Ptolemy is to be praised for introducing the prime number 5, Zarlino is entitled to divide the honor with him, since it was he who realized its musical value. It gives a vivid idea of the tenacity with which the Pythagorean theories were held, to know that Zarlino was obliged to carry on a vigorous defence of his innovations, his bitterest opponent being Gallelei, father of the astronomer, himself one of the best composers of the day.

It will be observed that throughout the foregoing illustrations in musical characters, C has been given as key-note. This, also, is to be taken in a merely general and symbolic sense. Neither at Athens, Alexandria, nor for more than a thousand years after the Christian era, was there anywhere in Europe a standard of pitch. It was not until instruments of plucked strings were provided with finger-boards and frets, that even the relations of tones supposed to belong to the same scale could be established with any certainty. This appears to have been done very early in China* and a long while before the Christian era in India—probably five hundred years before, possibly a thousand. There are no dates in Indian history. But in Europe this improvement was not effected until about 950 A. D., by Al Farabi, the celebrated Arabian mathematician. His work is still extant, in the library of the Escorial, and Mr. Ellis, in his supplement to Helmholtz's "Sensations of Tone," gives the following account of his musical scale. The pitches of the different tones within the octave were established by tuning four fifths upward, and twelve downward :—

Upward.—C, G, D, A, E.

Twelve downward.—C-F, B \flat , E \flat , A \flat , \ddagger D \flat , \ddagger G \flat , \ddagger C \flat , \ddagger F \flat , \ddagger B $\flat\flat$, \ddagger E $\flat\flat$, \ddagger A $\flat\flat$, \ddagger D $\flat\flat$.

This being reduced to the compass of the octave gives the following :—

Names.	Vibrations.
\ddagger D $\flat\flat$	260.25
C	264
\ddagger D \flat	278.1
\ddagger E $\flat\flat$	293
D	297
E \flat	312
E	330
\ddagger F \flat	329.6
F	352
\ddagger G \flat	370
\ddagger A $\flat\flat$	390.6
G	396
A \flat	417
\ddagger B $\flat\flat$	439.5
A	440
B \flat	469.3
\ddagger C $\flat\flat$	494.4

NOTE.—I have given the above in Mr. Ellis's notation, which, in addition to the letter names of the notes, distinguishes the exact pitch by the prefixed \ddagger and \ddagger . See further, on p. 154.

* I believe that I have somewhere seen a reference to a Chinese determination of the proportions of the tempered scale of twelve equal semitones to the octave, as having been made as early as 1500 B. C., I am inclined to think, however, that the date is mis-

We do not know how far these calculations were practically illustrated in locating the frets upon the finger-boards of lutes, for Farabi at least studied them upon the monochord, as also, possibly, his successors, Abdul Kadir and Mahmud Shirazi, the celebrated Persian theorists of the fourteenth century of our era, who transmitted them to us. It is worthy of note in passing, however, that in these indications we have an illustration of the contact of Greek and Hindu ideas. The lute, or the idea of it, was brought by the Mohammedans from India, in which country they made their conquests a century and a half before the time of Al Farabi. The musical theory, however, which his calculations illustrate is not at all that of the Hindus, but particularly and exactly that of Pythagoras. Thus, after so many centuries, we see the determinations of Ptolemy remaining unfruitful, for Al Farabi, as well as his successors, knows nothing about a major and minor third of 6-5 and 8-5 respectively; still less that these intervals belong among the consonances.

It was a long time before these discoveries of Pythagoras, Ptolemy and Euclid led to anything of especial importance in the way of transforming the tonal contents of music pieces, or the ideas of tonal relation, as illustrated in the production of new music of tonal structure conformed to these determinations, even in the simplest of them, that of the major third. In fact, the selection of degrees and relations of the musical scale has to be the work of the æsthetic judgment, inasmuch as the material thus provided is to be used exclusively for the production of combinations expressive of æsthetic ideas, images and conceptions; it was therefore necessary first to educate the æsthetic sense itself. This could not possibly be done through any number or duration of experiments upon a monochord, or through mathematical deductions. It had to come through the same organ as that to which the appeal of the newly organized artwork would be made, namely, through the ear. For this part of the education there was no apparatus ready in Greece, nor in Rome; and in the south of Europe, after the coming in of the barbarians, there was neither time nor heart for it, if the apparatus had been here in readiness for such use. In fact, it is only in the writing of Aristotle that we obtain evidence of the beginning of musical perceptions, as such, among any of the Greek philosophers or musicians of the latter times. In his Problems, he asks several questions of a musical import, such as, why the consonances

read for after Christ, since in Mr. Ellis's notes, up to Helmholtz, p. 784, Table X, † VI, D, the date is made after Christ, upon the authority of Pere Amiot. Various interesting particulars upon this head will be found in Mendel's Conversations Lexicon, article "Akustik der Alten," where the before Christ theory appears to prevail.

of the fourth and fifth are not also sung, as well as those of the octave, considering that they sound nearly as well. Again, why it is that the prominence of a certain note in the scale affords greater satisfaction than that of any other note. Here he appears to refer to the idea of a tonic. But in general, it will be useless to search Greek literature for anything of real significance concerning music, beyond the monody of the earliest times, in its limited compass upon the tonal side, and in its bondage to the text.

M. Féétis thinks that the suggestion of Aristotle, that other consonances than the octave might as well be used in what he calls symphony, led to the barbarous form of music called "diaphony," namely, the parallel progression of voices at the intervals of fourths, fifths and octaves. There has been an effort made from time to time, by modern German musicians, to show, or at least to suggest, that the ancients had no such barbarous idea as this in mind ; but in addition to the fact that the texts of the mediæval writers leave no room for doubt, there is the further evidence of the existence of instruments especially planned for carrying out just such a barbarous succession of chords. There was the so-called "organum," a stringed instrument, played with a bow, and with stopping apparatuses, which turned on a whole chord at once, like the "capo d' astra" of a guitar ; there were also organs with mixture stops in place of diapasons, and there was the Crwth, a violin, which by its straight bridge, and its method of tuning, shows incontestably that it was intended to play several strings at once ; and that the result could only have been a succession of chords, or else a bagpipe-like effect, with a drone, or bourdon, as they called these stationary tones and the lower strings producing them.

There is every reason to believe that the subject of harmony was approached from the other side, that, namely, of sense perception, before any further advance was made in the direction of conforming the tonal system in actual use to the intonations established by scientific deduction. This was done in the north of Europe, among the people of Celtic stock, and especially by that part of the family living in England. All of these northern nations had schools of minstrels, or bards, who, in their official relation, were a branch of the ecclesiastical hierarchy, the Druids. They were poets, philosophers, teachers, and musicians, all in one. Their office was handed down from father to son, but new material was continually taken in. Thus, they had the advantage of heredity, and added to it all that could be derived from a natural selection based solely on aptitude. The education of the bards was long and laborious. Their instrument was the harp, which already, in the earliest periods of the Christian

centuries, had attained considerable compass. It was through the operation of constantly retuning this instrument, and the corrective of trying one string against those others which ought to have any kind of agreement with it, that the ear became cultivated to the point where it began to tolerate, if not to demand, a major third in its music. The actual melodies of these times have all been lost, so far as we know; but from the fact that the music left in this part of the world possessed characteristics, at the earliest times when history is able to trace it, not possessed by the music of any other part of Europe, it appears indisputable that it is to these harpers and bards that we owe the introduction of the common chord into music, the invention or discovery of melody founded upon simple harmonic relations of the tonic and dominant chord, and for its expressive qualities relying upon the impression due to the association of tones in key. It is in further confirmation of the idea that this great improvement in music was made in England, that English music, even to this day, remains distinctively chordal in character, as distinguished from that of any part of the continent of Europe; besides, the national melodies of England, Ireland and Scotland are of a delicate and natural expression, having no relation to the dance, but resting upon poetic and musical sentiment, as such. In these respects they are to be held as superior to the popular songs of any other part of the world, as every Anglo-Saxon will agree in his heart. Moreover, it is a matter of record that upon the continent, in the earlier times, when harmony had only begun to feel its real powers, credit was given to English musicians for having exercised an important part in bringing it about. Fuller particulars upon this point may be found in the "General History of Music," by J. J. Fétis, especially in Volumes IV and V. It is altogether likely that, having once been put upon this trace, musical historians will yet find additional evidences of the activity and operative influence of England in effecting this transformation of the art of music.

THE INFLUENCE OF MUSICAL INSTRUMENTS IN EDUCATING SENSE PERCEPTION.

As already intimated, the education of the æsthetic sense to the deeper relations of chords and keys underlying the art in its new aspect, must have been made through the sharpening of sense perception, practically exercised upon the combinations of tones actually heard from the musical instruments in use, which, in turn, were themselves subjected to the improving influences of nobler and higher uses, and a development of higher capacity, through the incitation of more acute demands from the musical ears of the players. The instruments thus operative appear

to have been two—the harp and the *crwth*. The latter was a rude violin, apparently known to the Celtic tribes long before the Arab *rebec*, the predecessor of the modern violin, had been derived from India; at least, and certainly, before the *rebab* had found its way into Europe, which could not have taken place before the ninth century. These two instruments seem to have exerted an educating influence upon the players along two different lines, representing two different classes of musical coördinations. The harp, as already intimated, afforded the only means by which man could easily come to actual experiment in the effect of the harmony of simultaneous sounds. Indeed, the instrument invited him to observe properties and relations of this kind.

This, when once it is suggested, is an idea which needs no further discussion. It is evident that the continual exercise of tuning the harp, and sounding one string against another, in order to compare their adjustment, and the further pressure of emulation, in the search of greater sonority for the moments of especial intensity in the songs, would all operate to lead the player to observations upon the relations of sounds and of agreeable effects possible by combining them, such as could have no other effect than that of developing a perception of harmony, and a love for it.

This, in its essential nature, would be nothing else than an ability to coördinate tonal impressions over wider ranges of relations than had been usual or possible in the earlier music, and to discover by this means the underlying principles of unity, or, to say it in schoolboy phrase, to reduce them to a common denominator. It is probable that for a long time this coördination extended no further than to the use of the consonance of the third, or the triad at most. Very likely the third was used at first under protest, for want of sufficient compass in the instrument to permit the use of further lying consonances. In an old MS. of Welsh music for the harp, begun in the eleventh century, there is a specimen of harp music written in a manner confirming these views. Although the MS. itself is no older than the time of Charles I, it is a copy of an older one begun in the eleventh. There are citations from this in Fétis's work. They show that the feeling for chords had developed to some extent, but that the principles of tonality were not yet established. A remarkable melody in this collection is maintained throughout in the key of G in quite a modern manner, but at the last measure of each period it makes a cadence into C major; it is thus in one of the old ecclesiastical modes, but the whole treatment of this melody and its radical susceptibility to harmonization are completely modern, excepting only this cadence into the subdominant, or its being in the "key of Fa."

The instruments of the violin family appear to have operated in another manner as educators of the coördinating powers of sense perception. The writer had for some time thought that the violin must have been an agency principally operative in the transformation of music, and so no doubt it was, but not directly in the matter of chordal perceptions. It is easy to see that the exercise of playing a melody upon an instrument of this kind, where the place of every tone has to be made to agree with an ideal impression of the melody existing in the mind, and where the agreement is liable to vary by all sorts of imperceptible degrees, through the accident of the finger being placed a trifle higher or lower upon the string, would educate the ear to much more extended coördinations of tonal impressions than any of the instruments of antiquity would have power to do. These coördinations, however, were not so much those of tones heard simultaneously, as of tones having a unity, but extending over a considerable period of time in performance. Thus the violin had the effect of educating the ear to a longer retention of tonal impressions, and to a finer discrimination in comparing them. It also had a great influence in the direction of bringing out the determinative value of modifications of intensity in musical performance. Degrees of loud and soft must have been vastly more noticeable, even upon the crudest instruments of this class, and far more immediate to the player, as responding to his momentary moods, than anything of the sort possible upon any of the instruments of antiquity. Hence the violin must have been the instrument to which we are mainly indebted for our modern ability to conceive expressive melody, and to retain the conception in a form sufficiently definite and vivid to permit us to criticise its performance upon such an instrument.

The idea I formerly held, that the violin had been directly operative in advancing the modern use of harmony, as such, I hold no longer. It is sufficient to observe the very patent fact that even now, after some centuries of heredity in the harmony of simultaneous sounds, and after the instrument has been immeasurably improved in sonority and suggestiveness to the faculties of sense perception, it is still rare to hear a solo violinist intone harmonic intervals correctly. Double stopping, or the performance of simultaneous sounds, upon this instrument, is still proverbially inaccurate to such an extent that very few violinists, even among those of considerable celebrity as performers, are able to intone passages of this kind purely, or in such a manner as to agree with each other.

Moreover, nothing is more probable in its nature than just this kind of imperfection. For we have only to consider how difficult it must have

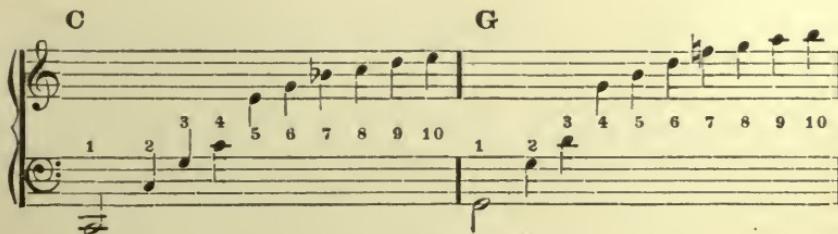
been for the early violinists to know, with any certainty, the nature of the intervals which they might now and then have stumbled upon, and to reproduce them at will and in such a relation to the discourse in which they happened to appear as would bring out their æsthetic value, or even would demonstrate to the musical ear itself their agreeable and novel nature. In the nature of the case these accidental consonances upon the violin must always have stood to the player in a wholly different relation to that of consonances produced at will by the harp player. The latter had always ready to hand the opportunity of verifying his discoveries, through an expedient no more difficult than that of touching again the same strings together. The violinist, on the contrary, would have to grope blindly among the possible combinations of his instrument until he had again reproduced the combination which pleased him, and the chances would be that, before he would have found it, his conception of it would have faded out to such a point as no longer to enable him to separate it from many other consonances nearly resembling it. He would be subjected to the same kind of inconvenience as the indifferent composer nowadays, who, having conceived a lucky idea, finds it to vanish into the commonplace before he can bring it out clearly enough in his consciousness to permit his securing it in writing. In the process one peculiarity of his conception vanishes after another, until he gives it up in despair. The gifted composer, on the other hand, has his conception with such a grip and clearness that he is able to retain it for days, and to write it down with the same certainty that one writes a business letter or a mathematical demonstration. The ability to retain musical impressions so clearly as to permit this is, no doubt, in considerable part, due to the influence of the violin; but the instrument had little or nothing directly to do with the ability to discern chords. Indirectly, the violin was of great use to this faculty also; for by just so much as it lengthened the persistence of musical impressions, and by just so much as it strengthened the conception of them as the direct expression of feeling, by just this amount it strengthened or ministered to the sense of harmony, and of the æsthetic faculties, under whose supervision all practical application of harmony, as a part of the means of musical expression, have to be made.

ELEMENTS OF IDENTITY IN RELATED TONES.

The progress through which the establishment of the mathematical relations of the tones of the scale has been reached was essentially one in the direction of self-consciousness, the underlying perceptions of relations not immediately obvious to the ear tending to clear themselves up, and to check themselves against certain phenomena in the sensation

itself, which, although unobserved at first, must sooner or later have come to the consciousness of acute hearers, and which, when once heard, could never afterward be ignored. Phenomena of this kind were chiefly two: The coincidence of partial tones in different sounds, whereby impressions of more or less complete equivalence were produced in the ear, and the coincidence of the resultant tones with the apparent bases of the combination. Both these classes of phenomena require a certain amount of explanation in order to render them clear to the untechnical reader.

The natural impression of careless hearers that a sound, a tone, is a simple affair, is dispelled upon investigation. Any tone having the resonance proper to a really musical sound, or, as we say, "possessing artistic quality," is composed of a certain number of partial tones; it has, along with the fundamental tone, which gives its name, its octave, twelfth, double octave, seventeenth, etc. These partials are necessary in order to give the sound an effect of elasticity or brightness. Tones not possessing these partials impress the ear as dull, lifeless, ineffective. The sounds of the wooden pipes of the organ are good examples of this class of tones. Hence, a well-made C consists not alone of the vibrations constituting the tone C, but also the other tones already named, or, in notes, thus:—



So, also, a good G would have more or less of the corresponding partials belonging to that tone, as shown in the musical notation above. On comparing these series of tones, we find that the chief ingredients of the compound sound, called G, are the partials of G itself, and these, in turn, were the second principal ingredient of the compound sound C. In the partial identity of these two sounds as to their inner nature we find an explanation of the naturalness of the step from C to G. When a progression is made from one sound to another whose composition differs totally, this impression of partial identity or near relationship does not exist, as can immediately be felt, when one changes from G to A, for instance. Even here there are secondary relations implied, which make themselves felt to the acute musical sensibility. For example, if A be regarded as the fifth of D, the change is much more tolerable than when

the A is regarded as its own root. This can be realized by playing the following progressions :—



The first one is wholly natural, indeed commonplace. The second is natural enough, if it be regarded as taking place from the fourth to the fifth of the key. Taking the first tone for tonic, the progression will sound far-fetched. In the third example the connecting chord is inserted. The unconscious influence of these identities and differences of partial tones in different sounds led, eventually, to a realization of the inherent propriety of harmonic combinations, long before the partial tones themselves had been distinctly or consciously perceived by the ear, or even their existence had been suspected. Thus, for example, when the combination C E G is presented to the ear, it immediately recognizes it as something in some way belonging to the tone C. This subconscious impression of identity or relation is due to the presence of both the new tones in the tone C itself, as the fifth and sixth partials, respectively. The correspondence of the triads with the partials already entering into their roots is the acoustical phenomenon upon which the doctrine of consonant harmony rests, or, at least, that upon which the doctrine of major triads rests. In the minor triads certain elements of dissonance are introduced. The combination C E flat G is still related to C, for although the element E flat is not in the compound tone C, the other two elements, C and G, are so predominantly characteristic of the tone C, that the ear immediately refers the combination to this, the one which nearest agrees with its nature. The dissonance involved between the tone E flat and the partial tone E in C, is a part of the source of the sad, melancholy or dissatisfied effect peculiar to minor triads. When minor triads were first introduced, the ears of composers refused to accept them as suitable for ending compositions. Even as late as the time of Bach it is common, almost universal, to find compositions in the minor key ending with a major triad. Those which avoid this contradiction between the ending and the whole previous course of the piece in question, do so by the meagre expedient of ending with the tonic unison, or, at most, with the open fifth.

The second class of acoustical phenomena tending to rectify crude

experiments in the harmony of simultaneous sounds was that of the resultant tones, or, as Mr. Ellis calls them in his translation of Helmholtz's work, differential tones. These are the impressions of tones created by the differences between the vibrational rates of two tones sounding together. For example, if the tones E and G, a tenth and twelfth above middle C, respectively, be sounded together on the reed organ somewhat forcibly, there will be heard a ghost of a tone, like a bass humming, which, upon touching middle C, will immediately be recognized as the octave below. Taking middle C at 264 vibrations per second, the E and G just sounded have 660 and 792 vibrations, respectively. The difference between these numbers is 132, which is precisely the number of the C below middle C. This is, therefore, the true root of the triad or combination sounding. These different tones were first noticed by certain violinists and theorists of the last century: Sorge (1740), an organist in Germany; Tartini (1754), in Italy; and Rameau (1753), in France. Tartini made use of them for correcting the intonation of his double stops upon the violin. These undertones can only be heard when the timbre of the tones sounding is somewhat telling in quality, and when the tones are sounded within certain limits of pitch and with considerable force. When the ear has learned to perceive them, however, it soon learns to distinguish them in other ranges of pitch and between tones less nearly related.

The difficulty of distinguishing these tones upon modern instruments, and the impossibility of distinguishing them upon instruments of such free vibration as the pianoforte, for instance, affords an excuse for the slow progress of ancient musicians toward a recognition of acoustical phenomena apparently lying so near them. It is evident that upon the lyres, harps, and other instruments of antiquity, these resultant tones could not have been produced, even if any of the instruments had been tuned in such relations as to have produced the simplest of them. The latter condition was wanting until after the time of the Celtic harpers of northern Europe. The Pythagorean thirds would not have produced these natural basses, nor was there sufficient compass for comparing the undertone with an actual tone present upon the instrument.

Nevertheless, when once these undertones *had* been discovered, and still more when their nature and causes had been investigated, they afforded an important means of rectifying harmonic conceptions, and therein an assistance toward a true theory of the scale itself.

Still, until there had been instruments capable of producing these tones with something like accuracy, even if perceived, they must have been misleading. For example, if the one of the two tones already men-

tioned, G for instance, had been slightly out of tune, say ten vibrations per second (not an important variation at this pitch for melodic purposes merely), the resulting undertone would not have been C, but some other tone, a little lower than C and extremely dissonant with it. Had such an undertone been perceived as the resultant tone of the combination E G, it would not have led to the recognition of C as the proper bass of it, because it would only have been necessary to have sounded C in order to have brought out a highly-trying condition of things between it and the resultant tone of the supposed consonance.*

DIATONIC CONTENTS OF A KEY.

According to musical theory as at present accepted, a key is a family of tones, all of which bear a definite primary or secondary relation to the key tone, or fundamental tone of the key. Thus, for example (using the sol-fa syllables, in order to free the statement from any connection with a particular absolute pitch), taking do as foundation, mi and sol stand at the interval of a major third and perfect fifth with it. This is the tonic triad. Upon sol a similar triad is built by the aid of si and re, standing as major third and perfect fifth with that. Under do a similar triad is constructed upon fa below, by the aid of la, do standing as fifth of it. Hence the following general formula of the constitution of the diatonic tones of the key :-

			Re	6
			Si	5
	Sol	6	Sol	4
	Mi	5		
Do	6	Do	4	
La	5			
Fa	4			

The tones in each of these triads stand to their principal in the relation of 6 and 5 to 4. Each triad, in fact, consists of the 4th, 5th, and 6th partials of a fundamental two octaves below the lowest tone. From these primary relations, the secondary relations of the tones to the general keynote of the whole are easy to deduce. Si, being $\frac{5}{4}$ of sol, which is $\frac{3}{2}$ of do, is, therefore,

* Mr. Ellis has discovered that in addition to these combinational tones and difference tones, when two or more tones are sounded at once, there are also very faint overtones produced by the sum of the two sets of vibrations. As these are very high, they are seldom observed. Mr. Ellis claims the credit of having discovered them for the first time, and of having explained them. Whether present or absent, they could hardly have had any influence upon the course of harmonic development herein described.

$$\frac{5}{4} \text{ of } \frac{4}{3} \text{ of } 1 = \frac{15}{8}.$$

Re, being $\frac{5}{4}$ of sol, which is $\frac{5}{4}$ of do, is, therefore,

$$\frac{5}{4} \text{ of } \frac{4}{3} \text{ of do, or } \frac{5}{3}.$$

Dividing this by two, in order to reduce it within the octave, gives $\frac{5}{6}$, the ratio of re to do. Fa, being under do at the interval of a 5th, is $\frac{5}{4}$ of 1 inverted, or $\frac{4}{5}$ of 1. Multiplying this by 2, to bring it into the octave above, gives $\frac{8}{5}$ as the ratio of fa. La being $\frac{5}{4}$ of fa, is $\frac{5}{4}$ of $\frac{8}{5}$, or $\frac{4}{3}$ of do. Hence the entire series following :—

do	re	mi	fa	sol	la	si	do
1	$\frac{5}{4}$	$\frac{4}{3}$	$\frac{8}{5}$	$\frac{5}{4}$	$\frac{4}{3}$	$\frac{15}{8}$	$\frac{5}{4}$

This formula holds for any degree or key whatever, although, as will appear later, no one of the musical instruments in general use is able to produce the series correctly for any one key, much less for all the keys required by composers.

This settlement of the relation of the tones of a key appears to correspond exactly with that of the Alexandrian astronomer, Ptolemy, as already recounted. After his investigations no new ratios were advocated in music until the days of Euler, who, in 1739, published his first important work upon the scientific aspects of musical intonation. In this he even advocated the introduction of still another of the prime numbers among the musical ratios, namely, that of 7, the sub-minor seventh 7-4 standing sufficiently lower than the usual place of the minor seventh to afford an agreeable consonance, with a peculiarly rich effect. No attempt has been made to put this recommendation into practice, so far as I know, except in the Enharmonic Organ of Mr. H. W. Poole, mention of which will be found later in this article.

The settlement of tonality here arrived at may have been facilitated by the experiments of the Netherlandish school culminating shortly before the time of Bach. It was found that in departing from a tonic, the natural order was by an ascending series of fifths ; a return involved a reversal of the process, *i. e.*, by a descending series of fifths. The effect of the continual illustration of this view in the works of composers was naturally that of associating the dominant and sub-dominant chords with that of the tonic in a peculiarly intimate manner—merely through the unconscious education of ear in hearing them in this connection.

Although this determination takes no account of the ratios of the minor chords, it nevertheless contains them—the major third taken away from the octave, leaving the minor sixth, and the minor third similarly subtracted, leaving the major sixth. Hence, in perfect intonation, not only would the major triads of the key be perfect, but the corresponding minor triads also—that is to say, the minor triads of the third and

sixth degrees; the minor triad of the second degree is not perfect, the fifth lacking a comma of being sufficiently sharp. Hence the theorists, at least the stricter of them, were formerly in the habit of classing this triad among the dissonances, not to be used without preparation and resolution. In this view the major and minor are merely two "modes" of the same scale, the difference depending upon the relative prominence of certain chords in pieces written in the one or the other mode, respectively. For example, a piece in the natural signature, having the chord of C for tonic, that is, for beginning and ending, and the dominant and sub-dominant properly related to it, necessarily impresses a hearer as being in the major key. One beginning with the chord of A, and surrounded by the triads of D minor and E, leaves the feeling of the key of A minor in the hearer.

CHROMATIC CONTENTS OF A KEY.

In all the determinations of the key, up to this point, only the diatonic tones of the key are accounted for. According to the ideas in vogue down to a very recent period, these were all that needed to be accounted for. The chromatic tones of the key, sharp one, sharp two, flat three, etc., which in modern music are of frequent occurrence, were supposed to have something to do with modulation, each one of them being borrowed from the key to which it was held more particularly to belong. At the present time, however, it is beginning to be considered that the key contains quite a number of these secondary tones, but their precise relation to the keynote is not ascertained; or, more properly, it might be said that, being used in a variety of ways, their exact status in relation to the key is subject to readjustment according to such momentary uses. Thus, flat six is oftenest used as major third below do, and its relation to do is therefore that of $\frac{4}{3}$. Sharp five, a tone identical in the tempered scale, is oftenest used as a major third to mi, *i. e.*, $\frac{5}{4}$ of $\frac{4}{3}$, or $\frac{25}{12}$. This leaves the interval from sharp five to do above equal to $\frac{13}{12}$, a very different matter. Taking this in the key of C, for illustration, C at 264 and the octave above at 528, A flat, a major third below, would have 422.4 vibrations per second. G sharp, a major third from E, in turn, a major third from C, *i. e.*, $\frac{5}{4}$ of 264 would equal 412.5 vibrations, a difference in pitch quite perceptible. In like manner flat two of the key would be most likely to be used as a major third below fa, or

$$\frac{5}{4} \text{ of } \frac{4}{3} = \frac{25}{12} \text{ of do.}$$

Do sharp, on the other hand, would oftenest occur as the major third of la below, or of do, $\frac{5}{4}$ of $\frac{4}{3} = \frac{25}{12}$, or dividing by 2, in order to bring

it within the octave, $\frac{1}{5}$. Taking C as before, 264, by this determination D flat would be

$$\frac{1}{5} \text{ of } 264 = 282.6.$$

C sharp, on the other hand,

$$\frac{1}{5} \text{ of } 264 = 275,$$

a very considerable difference. Discrepancies of this kind exist in all parts of the scale, and probably it is correct to say that the precise status of the chromatic tones within the key still remains undetermined. Moreover, current usage of remote modulations tends to make the indefinite still more indefinite.

According to strict theory, all keys are composed alike of diatonic tones, standing in the same ratio to their keynote as the formula already given above. In practice, it is, perhaps, not necessary to remind the reader this is far from being the case, since by reason of what is called "Temperament" we perform all our music for instruments of fixed scales in a tonal system having only twelve tones in the octave. In this way innumerable differences in the exact constitution of tones and chords are hopelessly mixed up. For example, there is the tone A, which, as sixth of C, stands to it in the ratio $\frac{9}{8}$. In the key of G, however, it is the second degree, or re, standing to its do as 9 to 8. Hence, as G is $\frac{9}{8}$ of C, we have the following:—

$$\text{A in key of C, } \frac{9}{8} \text{ of } 264 = 440.$$

$$\text{A in key of G, } \frac{9}{8} \text{ of } \frac{9}{8} \text{ of } 264 = \frac{81}{64} \text{ of } 264 = 445.5.$$

Similar discrepancies meet us at every turn.

According to the theories of harmony which prevailed until recently, changes of key take place properly by means of modulations, in which the fifth of one key becomes the tonic of the new one (modulations by sharps); or, *vice versa*, by making the tonic of the present key the fifth of the new ones. A set of diatonic modulations of this kind carried from C up to seven sharps, and from C downward to seven flats, would require tones having the vibration numbers shown in Table A, at the end of this chapter, C being 264.

An attentive study of this table, which contemplates no mathematically correct harmony more elaborate than triads, shows in place of the twelve semitones of an octave of our pianofortes and organs, no less than 28 or 30 different tones, several of which are very near each other, but the nearest far enough apart to furnish perceptible beats, ranging from one in a second to five or even more. For example: D in G has 594 vibrations; in the key of F it has only 586. E flat has 312, 307 and 317 vibrations, according to where you find it, and so it goes with all the rest.

These, however, are only a small part of the imperfections concealed by our tempered keyboard. Modern music modulates quite as freely to the major third above and below as it does to fifths. This, if fully carried out, would give rise to a new set of disagreements, all of which would have their source in the impossibility generating the ratio $\frac{5}{4}$, or any multiple of it, from $\frac{3}{2}$ or any of its multiples. Modulation by fifths proceeds to new tonics, standing to the previous one as $\frac{3}{2}$; modulation to the major third proceeds by the ratio $\frac{5}{4}$. A chain of modulation extending four removes from C, in each direction, gives rise to the numbers in table B, below. Here again, despite the fact that the scale of E, for example, starts from a different E to that obtained by the circle of fifths, and therefore has different notes throughout, we find identities between the tones and some which reach us from quite an opposite direction. This kind of a scale of E is almost identical with that of "low F flat," to use Mr. Ellis' terminology, or the scale of F flat that is reached as the eighth in a series of descending fifths, as shown in table A, below. Upon reference to certain of the enharmonic changes employed by Wagner and other modern writers, where the notation by flats is used in changes from keys with sharps, it will be seen that by coincidence or intention the method of writing employed by the composer is approximately accurate for perfect intonation, whereas if he had used the notation which would-be purists sometimes tell him he ought to have used, his enharmonic changes would have been far from anything tolerable if truthfully intoned. I am not aware of any existing information as to whether Wagner, for example, had ever paid attention to the mathematical relation of scales, although from the attention which the subject received from Helmholtz and others during his maturity, I think it more than likely that he did. This, however, would never have induced a composer so bold as he to modify practices not in the first instances commanding themselves to his own harmonic intuitions, which were phenomenally keen.

In the former table, again, there are E's with vibration numbers of 347 and 352; here we have them of 330. D sharp and E flat, again, standing in the former table at 307, 312 and 315, here occur at 310 and 324.

These discrepancies would not matter at all in melody, for when there is only the recollection of a tone just heard, to serve as a basis of comparison, the ear is not able to discriminate with the closeness necessary for noticing such minute differences as these. But when harmony is employed, and each one of these tones, or any half-way compromise between them, is liable to be brought into use as a third or fifth to some

other tone sounding at the same time, the disagreement assumes the form of what are known as "beats," in which sound-waves are occasionally extinguished by encountering each other at precisely the proper moment in their respective vibrations. The number of these beats will be exactly so many per second as the difference of vibration numbers of the two sounds between which the beats occur. Hence, when, instead of E 330 as third of middle C, we attempt to use the E of the key of D, which should have 333.9 vibrations, there will be about four of these beats per second, and the result will not be at all pleasing. When the beats exceed a certain ratio, they render the union of the two sounds offensive, that is to say, discordant. It may well enough be conceded that the human ear has a wonderful capacity of adapting itself to degrees of imperfection, whereby relations which at first sight would be thought impossible or inadmissible, become tolerable, and by their very disagreements take on a kind of individuality, and thus a degree of expression, which the more perfect consonance, not having these beats and this appealing quality, misses. Nevertheless, it makes an important difference whether these dissonances come as an incident, due to the imperfection of our instruments, and accordingly enter into the presumed sweetness of concords, or whether they are intended for what they really are, and are employed for the purpose of emphasizing harmonic movement, and for contrast with consonances purely produced. The latter is the true method of using dissonances, if dissonances are to be used at all, but as yet it has never been carried out in practice—all the consonances of tempered music being more or less out of correct intonation.

TEMPERAMENT.

It is only in modern times that musicians have seriously considered these discrepancies arising between the tones practically used and those which pure theory would require for a perfect transposition of the scale—or, more properly, for a perfectly attuned music in various keys. We do not certainly know when the art of modulation began to be employed. From the faint recognition of the tonic in Greek writing upon music—Aristotle's question being almost the only clear reference to such a phenomenon—it is altogether likely that the Greeks had no such practice as that known to us under the name of transposition of the scale. It is very possible, and indeed probable, that they were able to take the same melody at higher or lower pitch, not through a process of transposition, as we do, but by the use of different lyres, of a little lower or higher pitch, the mental process and the manual of execution remaining the same. I am aware that Westphall, in his great work upon Greek music

and harmony, asserts that the Greeks had a complete transposition system, with twenty-four tones in an octave. In my opinion, however, this assertion is altogether too strong; in the absence of clear indications upon the subject, we have nothing better than to fall back upon *a priori* considerations, which this hypothesis requires us to ignore. A transposition system belongs to a period of quite mature musical perceptions. Now we know perfectly well that the Greeks had no harmony of simultaneous sounds except the singing of men and boys or women in supposed unison, but in fact in octaves; their largest musical instruments had only seven tones compass. If we suppose that the great lyres of which Plato speaks, from Asia, were in occasional use, the indefiniteness of his description shows that they were by no means common, and, most likely, were only the curious personal property of some virtuoso, a Liszt of his day, who had contrived new means of astonishing the public by the addition of tones to his instrument. A transposition system implies an idea of tonality strong and well fixed, such as could not have existed among the Greeks; for the directions given by their writers for tuning the lyre show that it was tuned by a sort of guesswork, as, indeed, was necessary in the absence of sufficient compass for affording the harmonic bearings for tuning it strictly. As a guide to the correct pitch of the first tone, Aristoxenus directs the singer to sing his most convenient note; taking this as a starting-point, he is to tune the remainder according to the usual order. In fact, every word concerning music in the Greek writings indicates, beyond dispute, that as an art of tonal relations, it was only the handmaid of speech. Tonally considered, it was in its infancy, and the principles out of which our scales and systems have been developed were not discerned by them nor by any people until long afterward.

It is likely that modulation was not employed until the time of the development of extended compositions for many voices, and long after the invention of instruments of fixed scales, and of too large size to permit the substitution of a smaller one for a larger, or *vice versa*, as the Greeks did with their lyres, and as we still do in the orchestra with our clarionets, etc. This instrument was the organ, and the time of this larger development of music was as late as the fifteenth or sixteenth century of the Christian era.

Even then it does not appear that the ears of musicians were offended by discrepancies of the kind we are now considering. Nor was it reasonable to suppose that they would be. For we are to remember, first, that the ears of the people were still demoralized by the old organs, which had mixture stops where we have diapasons, thus giving rise to frightful dissonances whenever two notes were sounded together. Even

when we omit the third, and compose a mixture of octaves and fifths, a series of sixths, such as those of the so-called Faux Bourdon, would have afforded a horrible number of discords. For example, suppose the series of sixths in example (a) to be played upon an organ stop giving three tones for one, or C G C for C. The resulting tones would be those indicated at (b):—



Moreover, the early practice of vocal music in parts in the Netherlands and upon the continent of Europe generally, shows that the ear for harmony was still in its most elementary stage. The masses of the Netherlanders were composed in many parts, and a secular melody was often taken as the foundation, or *cantus fermus*. The elaboration was such that little of intelligibility could have been made out from the sound ; it was intelligible and admirable only when studied by the eye, and the various elaborations traced one after another. Moreover, it is in evidence that the old organs had only a part of the usual supply of black keys ; which could only have happened through the full supply being regarded as not indispensable. This indicates plainly that modulation, if used at all, as most likely it was, only went a short distance, not more than three or four keys, at most, being available. We do not know the system by which they were tuned, but the probabilities are that the key of C, or the natural key, and two or three of its nearest relatives, were the only ones possible upon these instruments. Into these all the consonance possible was concentrated, leaving the so-called "wolf" of tuning for the remote keys. In such a system of tuning the dissonances would not have appeared excessive, especially to ears not accustomed to refinements of accurate pitch and as yet uneducated to a realization of the resultant undertones and clashing partials of these imperfectly related tones.

It was not until nearly the time of Sebastian Bach that any serious effort was made to introduce the free use of all keys upon instruments of this sort, and the historical prominence of Bach's "Well-Tempered Clavier" rests upon its influence as a pioneer in this direction. It is also

matter of record that the system of equal temperament was not applied to organ tuning for many years later.

Temperament, therefore, is only a system of compromise, whereby all intervals except the octave are allowed to remain something short of perfect intonation, in order to secure the supposed advantage of limiting the tonal system to twelve tones in every octave. The division of the octave into twelve equal semitones is said to have been known to the Chinese at least as early as A. D. 1573, and according to some writers, many centuries earlier. Père Amiot, in his work upon the music of the Chinese, gives the directions of Prince Tsai-Yu for constructing a set of bamboo pipes, according to exact measurements of size and lengths, for producing the twelve semitones of an octave. Nevertheless, the music of the common people remained that of the five-toned scale, as it does in all half-civilized countries to the present time.

In table A will be found the vibration numbers of the tempered scale, starting from middle C, 264, the diapason of Helmholtz's work, and the correct intonation of all the notes reached from middle C by nine removes by fifths in both directions. At the top of each column will be found the name of the keynote; the tones of the octave are written upon the line of the corresponding tone in the tempered scale, but the name of the tone will often be different. For instance, the scale of F flat is written upon the degree of E, and all its tones bear different names from those of the degree upon which they are here written. It is the same with the scales of B \flat , E \flat , etc. All the notes written upon any one horizontal line in the table are represented by the single tone of the tempered scale written upon the same line in the centre column. Temperament undertakes to get along by ignoring all the differences here represented by the different vibration numbers in the same line, as well as the additional relations generated by third relations, as shown in table B.

IS THE TEMPERED SYSTEM LIKELY TO BE PERMANENT?

At this stage of the discussion the question naturally presents itself, Whether, upon the whole, the general trend of musical progress is in the direction of ultimately securing a more perfect tonal system than that of the tempered scale, or whether, upon the other hand, we are to regard all these deductions of mathematicians and physicists as so many over-refinements, interesting as studies, but, for practical purposes, mere chimeras. In harmony with the latter view, the historical fact may be recalled, that in all periods of musical history there has been a hiatus between the deductions and theses of musical scientists of contemporaneous repute

and the tonal combinations producible upon the musical instruments of the day, and accepted by composers as a sufficiently accurate reproduction of their conceptions. The historical point is well taken ; but its plausibility as an argument immediately vanishes when we remember that the same kind of discrepancy between the ideal and the real meets us everywhere. Progress, from first to last, and in every department of human endeavor, has been the result of efforts at closing this gap, or at least of narrowing it, by bringing the actual more nearly up to the standard of the ideal. And although the gap still exists, just as no one has ever been able, by running, to reach the point where the rainbow rests upon the earth, the actual, over and over again, in almost every department, has reached point after point where but a little while before had been the boundary of the ideal as at that moment conceived. This has been the case in music quite as decidedly as in other departments of art and invention. Nevertheless, it has always happened in these efforts toward perfection, that the mind itself has become stronger and more clear-sighted, the first token of which, with each new point gained, has been a new adjustment of the standard of the ideal, whereby, consequently, the difference between the actual and the ideal has become again as wide as before.

Moreover, it is no argument to say that inasmuch as the old masters, such as Bach, Haendel, Beethoven, etc., accepted the tempered scale and found it good enough for them, therefore there is no reason in smaller men desiring something much more difficult of attainment, as a tonal system undoubtedly would be, capable of producing the scale in all the keys nominally used by composers. Bach and Haendel accepted the scale in equal temperament as a great improvement over the imperfect scales in use before their day. Nor need it be a subject of wonder that they should have been so unconscious of the imperfections and discords of the system. The musicians before the time of these giants of music had been accustomed to instruments which afforded a large percentage of dissonance, in spite of the very best efforts of the most expert tuners to remedy the fact. The compositions of the Netherlanders, as already intimated, were not capable of being performed in pure harmony. The clear-sightedness of Bach and Haendel is seen most conspicuously in the fact that although the instruments upon which they had to play their compositions, excepting the violin, were extremely crude and full of imperfections, they nevertheless wrote music which sounds as if it must have been intended to be given in pure intonation. This fact is due to the influence of Haendel's study of the voice and to Bach's study of the violin, upon which he was a fine player, as is plainly seen from his great

sonatas for violin solo. While the tempered system might be, and was, good enough for Bach, who lived only a short time after the use of organs with predominant mixture stops and the small-toned claviers of his predecessors, it was because it afforded him an opportunity of representing musical relations which, upon the instruments tuned in the unequal temperament, were absolutely intolerable, but which, to the clear perception of this great master, were as well worthy of use as any of those which convention had made the common property of composers. It was the same with Beethoven. These great masters were not occupied with the task of improving the musical instruments of their times, or of conforming their works to the standard of imperfection thus arbitrarily and temporarily set up; what they were seeking to do was to unfold new vistas of musical delight, to spread out before man a new heaven and a new earth of tones, in which all kinds of righteousness dwelt. The provision of instruments capable of producing these conceptions they left to their successors.

When we look at it from another point of view, the problem presents a different aspect. The general tendency of musical progress, through the efforts of the Netherlanders and the German composers who succeeded them, was in the direction of a clearer discrimination between consonance and dissonance. The free use of dissonances, which prevailed in the darker periods of the Middle Ages, had now given place to a more intelligent use of them for emphasizing harmonic motion, and for representing the appealing, the unresolved, and the unsatisfactory. In the opposite direction, the use of consonance had gradually cleared itself up as the expression of the beautiful, the contentful, and the satisfied. In this growing disposition to contrast these two modes of combining tones, the consonant and the dissonant, and the two states of emotion represented by them, the satisfied and unsatisfied, modern music has cleared up the distinction between them, not alone as to the inner peculiarities of soul-condition represented by them, but also as to the actual composition of the two modes of tonal relation themselves. The ear for dissonance has become more and more acute; and the sensitiveness to dissonance greater and greater. In the same line the idea of poetic justice now demands the resolution of dissonances more imperatively than formerly, as the expression of the final realization of a poetic justice.

All this points very plainly to a time when instruments will be able to represent every consonance and dissonance allowable in the tonal system in use, accurately, according to its real nature, measured in physical terms by vibration-ratios. Now that we know so well what sound is, and what these relations of tones, which mean so much to the imagina-

tion, consist of, as so and so much physical disturbance, there is less reason for allowing ourselves to be put off with a substitute incapable of distinguishing the differences between many of the finer shades of tonal combinations, which, to a composer's mind, mean something very distinct from each other.

PERFECT INTONATION FOR SINGING.

The modification has already begun to be made, and in the place where there was the greatest need of it, and the place also, where it could be made most easily of any, when once the right clue had been hit upon. That place, it is not necessary to say, is the voice. The Tonic Sol-Fa people, in England and elsewhere, have advocated the study of singing with perfectly-tuned instruments, or without instruments, in order to allow the ear to form itself to pure intervals, and to assist the voice thereby in truthfully interpreting the key ; and above all to allow the tone ensemble to blend in a way that it cannot do when the intonation is faulty. Experience shows that this is the way to secure better results in chorus singing, and that solo singers are more reliable and true to the pitch when their elementary instruction has been conducted upon this plan. Of course, these people cannot be accompanied by any instruments whatever now in use, without generating dissonances between the correctly tuned voices and the dissonant instruments. It is only upon violins, in the hands of players similarly trained, that accompaniments can be found.

Quite a number of organs have been constructed in different parts of the world, for the purpose of playing music purely, just as it is conceived in the mind of the composer. An account of these will be found in the appendixes to Helmholtz's work. Among the more noteworthy there has been one of American origin, by Messrs. Alley and Poole, of Newburyport, Mass. This instrument was actually constructed* about the year 1850 ; it was played upon by the writer for a number of times, and the effect of its diapason and trumpet stops without other addition, was singularly sweet, rich, and powerful in full chords of the seventh. Mr. Poole, the mathematical principal of the invention, employed the pure seventh, or sub-minor seventh, having the ratio to the tonic of $7:4$ in place of the $9:16$ usually regarded as the proper one. The principle of this instrument was that music is never in two different keys at the same time ; and that modulations are made across chords which are common to the old and the new keys. Hence, while holding a chord of C or G and intending to modulate into G, it was only necessary to touch a modu-

* Mr. Ellis, the English translator of Helmholtz's "Sensations of Tone," appears in doubt whether it was more than planned, see p. 635.

lating pedal, which connected the new F for the minor seventh, an F sharp, and a new A, with the keyboard, and disconnected the ones previously in use. Then the next following chord, if in the key of G proper, would come in pure intonation. After twelve years' use in the church of Rev. James Freeman Clarke, in Boston, it was taken down and packed away, the inventor having removed to Mexico, leaving no one behind able to keep it order. Nothing came of this experiment of Messrs. Alley and Poole, for in order to play their organ correctly an entirely different knowledge of harmony was requisite from that sufficing to play ordinary music upon the usual organ.

No information is accessible to the writer as to whether the best orchestras play in perfect intonation or in tempered intervals. The inference would be that in consequence of the necessity of regulating the tone according to the tempered scales of the wood-wind, the majority of the intonation must be made as near the tempered standard as the players can get it; but it would also seem that in passages where the harmonic notes of the brass dominate the effect, the intonation must be more nearly perfect, since the brass cannot easily be played in anything but perfect tune, in its harmonic notes. Moreover, it is likely that no small part of the characteristically smooth and blending quality of tone in the softer passages of such orchestras as that of Mr. Theodore Thomas is due to modifications of tempered intervals sufficient to greatly sweeten them, if not to rectify their imperfections completely.

The tendency of musical progress, upon the whole, appears to be in the direction of a fuller and fuller recognition of the disadvantages of temperament, and it is altogether likely that some instrument will presently be invented, solving the problem in so simple a manner as to be practicable, or at least that a separation will take place between instrumental and vocal music, and particularly choral music, seeking the sweetness and richness of perfect intonation, which also has the advantage of assisting the voice in adhering to the key. Instrumental music, meanwhile, will go on as best it may, until the problem of a practicable instrument, able to reproduce music correctly according to its real nature, is successfully solved. Whether the reform here indicated shall take longer or shorter to complete, whether it turns out to be difficult or easy, it is, nevertheless, demanded, not alone by mathematical considerations, but by the still more emphatic ones of euphony and the satisfactory blending of sounds. It is, therefore, certain to be reached sooner or later.

The tables A and B at the end of this chapter contain material enough for a considerable amount of reflection upon the subject of temperament, and the extent of the evils it attempts to conceal; but for the

aid of those desiring to compute intonations from other starting points, the logarithms of the principal musical intervals are added in table C. By the aid of these and a table of the logarithms of numbers, such as may be found at the end of any treatise upon trigonometry or analytic Geometry, these calculations become easy. For the benefit of amateur mathematicians, not familiar with the processes by means of logarithms, the following rules are appended :—

RULES FOR COMPUTING INTONATION.

1. To find the logarithm of a tone a certain interval *above* a given tone, first find the logarithm of the basal tone, or tone upon which the interval is to be reckoned, from the vibration number in table A, and the logarithm of that number in the table of logarithms. Then add to this logarithm the logarithm of the interval ; the result will be the logarithm of the vibration number of the tone making that interval with it. For example : To find the major third above A flat in the scale of C flat. The vibration number given in table A is 412. The logarithm of this is .2614897. Add to this the logarithm of the major third, according to table C, .096910. The result is .3581807, which the table shows to be the logarithm of 515, which, accordingly, is the vibration number of the tone desired.

2. To find the major third *below* the same tone, subtract the logarithm of the interval from that of the tone. Example :—

$$\begin{array}{l} \text{A flat in C flat has } 412, \text{ logarithm} \dots .614897 \\ \text{From this take the logarithm of } 3d \dots \underline{.096910} \\ \text{Result} \dots \dots \dots .527987 \text{ logarithm of } 337.2. \end{array}$$

In like manner the interval *above* any tone can be found by *adding* the logarithm of the tone to that of the interval, the result being the logarithm of the tone desired. To find the interval below, *subtract*. To reduce an octave, subtract the logarithm of the octave.

For the convenience of those preferring the laborious, but to them, surer way of fractional computations, the fractional ratios are given in the second column of table C.

3. To divide the octave into any number of equal intervals, divide the logarithm of the octave by the number of intervals required. The result will be the logarithm which must be added to the logarithm of the first tone to obtain the logarithm of the second tone in the series ; the third is obtained by adding the same logarithm to the logarithm of the second, and so on until all are obtained. All computations lead very soon to fractional parts of vibrations, in taking which it will be necessary to adopt some rule as to throwing away the odd fraction upon one side or

the other. For example, the logarithm 2.527987 above is not precisely the logarithm of 337.2 as given above, but a trifle more; it is not large enough, however, for the next decimal, so we take it as before. Differences of the last two figures in a logarithm denote only fractional parts of tenths of vibrations; they may, therefore, be treated with a degree of disrespect, except where extreme accuracy is desired.

In Professor Ellis' appendixes to Helmholtz's "Sensations of Tone" he proposes a notation of intervals which possesses the advantage of simplicity, and reduces the labor of computing a series of scales, like those in table A. Use was made of it in correcting this table. In transposing scales by fifths upward, two new tones are wanted in every remove. They are a second degree, a comma higher than that of the previous scale, and a new seventh. All the remaining tones stand just as they did in the previous key. For instance, let it be required to find the tones of the key of G, having C already. The new second, a comma higher than the A in C, we will mark with a dagger †A, and read it "high A." This will remain the A of the scale of D. In like manner, when after the scale of A we desire that of E, we will need a new F sharp, a comma higher than that of A. It will be written †F♯, and read, as before, "high F sharp." Thus, by continued transpositions, all the notes will bear the mark "high."

In transposing by a descending series of fifths, there is a new fourth tone, and a new sixth, a comma lower than the same degree in the preceding scale of the series. For instance, in transposing from C to F, besides the new B flat for fourth in F, there is wanted a new D, a comma lower than that of C. This we write ‡D and read "low D." Then in B flat there will be a ‡G, or "low G," etc., until all the notes bear this distinguishing mark. Occasionally a second reduction is wanted, whereby we have "double low" so-and-so. These marks can be used, and the final determinations of the vibration numbers be left until the end. In computing from tones not derived from C by fifth transpositions, as in the series of third removes, in Table B, this notation is of no assistance.

VIBRATION NUMBERS OF TEMPERED SCALE AND THOSE OF PERFECT INTONATION—COMPUTED FROM MIDDLE C 264.

THE TONAL SYSTEM.

Series of Descending Fifths.										Series of Ascending Fifths.									
Ebb.	Bbb	Fb	Cb	Gb	D ^b	A ^b	E ^b	B ^b	F.	C.	G.	D.	A.	E.	B.	F [#]	C [#]	G [#]	D [#]
***	***	***	***	***	740	***	***	***	***	791	G	***	792	***	***	***	***	***	***
***	***	***	***	693.7	***	***	***	***	704	746.6	...	742.5	***	***	***	758.2	***	***	***
***	***	667.7	***	***	618	***	***	655.8	***	705	F	...	643.5	...	668.3	...	704.8	...	...
584.6	***	616.6	***	***	586.6	***	586.6	586.6	586	660	E	...	626.5	...	626.5	598.3	...	634.3	594.6
548.1	***	548.1	555	556.2	***	***	559.2	559.2	559.2	677.8	D	...	594	594	594	556.9	563.8	553.8	522.6
487.2	***	493.3	493.3	493.3	521.5	521.5	528	528	528	498.3	C	...	528	528	528	556.7	563.8	553.8	522.6
365.4	***	462.5	462.5	463.5	469.3	469.3	470.3	470.3	470.3	495	B	...	495	495	495	501.7	501.7	501.7	501.2
438.5	438.5	438.5	441.1	441.1	416.2	417.2	417.2	417.2	417.2	440	A	...	440	440	445.5	445.5	445.5	445.5	445.5
389.8	***	390.8	390.8	390.8	391.1	391.1	391.1	391.1	391.1	396	G	...	396	396	396	417.6	417.6	417.6	422.2
329	329	329	333.7	333.7	337.7	347.7	347.7	352	352	352.3	F	...	352	352	352	375.7	375.7	375.7	375.7
39	39	39	333.7	333.7	337.7	347.7	347.7	352	352	352.3	E	...	330	330	334.1	334.1	334.1	334.1	334.1
293	293	293	309	309	312.9	312.9	312.9	312.9	312.9	313.9	D	...	297	297	297	313.3	313.3	317.1	317.1
281.2	281.2	281.2	278.1	278.1	278.1	278.1	278.1	278.1	278.1	296.3	C	...	279	279	279	284.4	284.4	281.4	281.4
246.7	246.7	246.7	246.7	246.7	260.7	264	264	264	264	264	B	...	264	264	264	281.9	281.9	281.4	281.4
219.2	219.2	219.2	234.7	234.7	234.6	234.6	234.6	234.6	234.6	234.6	A	...	222.7	222.7	222.7	250.6	250.6	250.6	250.6
...	...	...	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	...	...	...	...	...	211	211	211	211

TABLE B.

VIBRATION NUMBERS OF SCALES MODULATING UPWARD BY MAJOR THIRDS
FOUR REMOVES FROM C, AND DOWNWARD FOUR REMOVES BY MAJOR
THIRDS FROM THE SAME POINT. C TAKEN AT 264.

Bbbb.	Dbb.	Fb.	Ab.	Tempered Scale.		Just C 264.	E.	G#.	B#.	D#.
...	...	...	...	791	G	...	...	...	...	...
...	...	...	...	746.6	...	...	...	...	...	...
...	...	...	...	705	F	...	...	...	...	...
...	...	675.8	...	665.2	E	...	660.1	...	...	644.5
...	...	633.6	...	627.8	...	...	618.7	...	...	604.1
...	...	...	...	592.6	D	...	...	...	...	...
...	...	563.0	...	559.2	...	...	550	...	...	536.8
...	540.7	...	...	528	C	528	...	...	514.4	...
...	506.9	506.8	...	498.3	B	495	495	...	483.3	484.4
...	...	...	...	470.3	...	...	...	...	...	...
...	450.4	450.4	...	443.9	A	440	439.9	...	429.4	429.5
432.6	...	422.4	422.4	419	...	...	412.5	412.5	...	402.8
405.5	405.5	...	396	395.3	G	396	...	386.5	386.5	...
...	...	380.2	...	373.3	...	...	371.1	...	...	391.1
360.3	360.3	...	351.8	352.3	F	352	...	343.5	343.6	...
...	337.9	337.9	...	332.6	E	330	330	...	322.2	322.2
324.4	...	...	316.8	313.9	...	...	...	309.3	...	...
...	304.1	...	...	296.3	D	297	...	...	290.2	...
287.9	...	...	281.5	279	...	...	...	274.9	...	...
...	270.3	...	264	264	C	264	...	252.7	257.2	...
270.3	...	...	...	...	B	...	...	...	...	...
243.3	...	...	237.6	...	A	...	...	...	...	...
...
216.3	...	...	211.2	...	...	...	...	206.2	...	...
...	...	...	...	...	G	...	...	...	...	...

TABLE D.
DIVISIONS OF THE TETRACHORD.

GENERA.	ARCHYTAS [ABOUT 400 B. C.]	ERATOSTHENES [200 B. C.]	DIDYMUS [150 A. D.]
Enharmonic ...	X X X X X X X X	X X X X X X X X	X X X X X X X X
Chromatic.....	X X X X X X X X	X X X X X X X X	X X X X X X X X
Diatonic.....	X X X X X X X X	X X X X X X X X	X X X X X X X X

PTOLEMY [ABOUT 150 A. D.]

Enharmonic.....	X X X X X X X X	Diatonic {	Soft.....	X X X X X X X X
Chromatic { Soft.....	X X X X X X X X	Ditonic...	X X X X X X X X	
{ Intense..	X X X X X X X X	Intense...	X X X X X X X X	
		Equable	X X X X X X X X	

The above table of the Greek divisions of the Tetrachord is taken from Sir John Hawkins' "Musical History," Vol. I, page 32. It shows that while there had been a progress in theoretical ideas during the five centuries covered by it, mainly evidenced in the adjectives prefixed by Ptolemy to his different divisions in the same genera, they do not indicate the influence of an underlying artistic conception of a tonal system. It will be seen that the upper interval in the enharmonic was invariably or approximately a major third; in the chromatic, a minor third, and in the diatonic, a whole step, sometimes large, sometimes small. The "Diatonic Intense" of Ptolemy is the modern major. Here, again, his limitations appear in basing his tetrachord upon the scale tones mi or si. Hence it is wrong to credit him with having discovered modern major tonality.

TABLE C.

LOGARITHMS AND RATIOS OF PRINCIPAL MUSICAL INTERVALS.

NAMES.	RATIOS.	LOGARITHMS.
Comma	81-80	.005395
Pythagorean Comma	531441-524288	.005885
Diesis	128-125	.010310
Equal Semitone . . . . .		.025085
Small Semitone	25-24	.017728
Pythagorean Low Semitone	256-243	.023633
Sharp	135-128	.023123
Semitone (C-Double)	16-15	.028027
High Semitone	27-25	.033423
Equal Tone . . . . .		.050171
Minor Tone	10-9	.054757
Major Tone	9-8	.051152
Equal Minor Third . . . . .		.075257
Minor Third	6-5	.079181
Major Third	5-4	.096910
Pythagorean Third	81-64	.102305
Equal Fourth . . . . .		.125429
Fourth	4-3	.124938
Equal Fifth . . . . .		.175600
Fifth	3-2	.176091
Equal Minor Sixth . . . . .		.200686
Minor Sixth	8-5	.204120
Major Sixth	5-3	.221848
Equal Major Sixth . . . . .		.225772
Equal Minor Seventh . . . . .		.250858
Equal Major Seventh . . . . .		.275944
Minor Seventh	16-9	.249877
Major Seventh	15-8	.273001
Octave	2-1	.301030*

* The full logarithm of 2 is .30102 99913 27962, etc. For ordinary purposes, where extreme accuracy is not essential, it may be taken as in the usual tables, as above.

The Fractional Ratios of any interval not in the preceding table can easily be obtained when wanted, by tracing the derivation of the interval. As, for instance, let it be desired to find the ratio of A in the key of G to C: as A in G is 9-8 of 3-2 of C, it is 27-16 of C.

A flat, in C, used as the major third below, is 4-5 of the octave, or 2-1; hence 8-5.

In like manner the fractional ratios of all intervals can be computed.

The logarithm of an interval is the logarithm of the fractional ratio of the interval, reduced to a decimal form. For instance, the perfect fifth is 3-2, or in decimals 1.5. The logarithm of this is the same as the logarithm of 15, viz.: .176091. The fourth 4-3, in decimals is 1.333, of which the logarithm is .124830. In like manner any needed logarithm can be found.

CHAPTER NINTH.

THE TONIC SOL-FA AS A MOVEMENT IN MUSICAL EDUCATION.

The name "Tonic Sol-Fa" itself, is a water mark of a musical controversy, as to whether the sol-fa syllables should be applied to notes according to their relation to the tonic, or according to their relation to absolute pitch. According to the latter method, which has never had much currency in this country, any kind of a C, C-sharp or C-flat, is called "do," no matter what its place in key; every kind of G is called "sol," etc. In America, however, the tonic method of applying the sol-fa has always prevailed in practice, and has always been maintained in elementary books until quite recently. In this method the key note is always do; the second tone of the scale is always re, etc. In England, the "fixed do" system prevailed in official circles until Mr. Curwen's introduction of the tonic method, and his persistent demonstration that better results were attainable under it than by the other way. There is a deeper question underlying this one of mere vocal expediency; it is whether music is "*thought in key*," as the Tonic Sol-Fa people say, or whether it is thought in absolute pitch. Concerning this there is no longer room for argument, scientific conclusion and the practice of artists agreeing that the mental effect of tonal relations and successions, employed for musical purposes, depends upon their mutual relation to a given tonic, or tonics. The entire doctrine of what is called modulation, depends upon the thesis that music is never in two different keys at the same time, and that every change of key is an element of musical consciousness, perceivable by the hearer, and therefore, available by the composer, as one of the means of expressing the feeling or delight intended. Upon this point there will be room for further consideration later in the present discussion.

Before entering upon an exposition of the Tonic Sol-Fa system, it is desirable for the reader to free himself as far as possible from certain prepossessions against it, too often held by professional and amateur musicians who have not given the subject serious consideration, with a tenacity amounting to prejudice, which, therefore, operate to interfere with the fair consideration of the evidence and information which it is the place of the

present article to afford. The first is, that the Tonic Sol-Fa is a quack system of teaching music, or what the Professor at the Breakfast Table once called "a pseudo science;" that is, an apparatus of terms and plausible inferences unwarranted by sound induction. So far from the Tonic Sol-Fa system being more superficial than others, it is the only system of elementary musical instruction in existence containing within itself the elements of the most advanced conclusions of musical science, and the principles of tonal relation and a recognition of mental effects produced by them, such as the greatest creative musicians, as Haendel, Mozart, Beethoven, Schumann, and the rest, have employed for expressing their musical imagination. Let me repeat: So far from the Tonic Sol-Fa being peculiarly a plausible make-shift for beginners in singing, who never mean to go very far, it is distinctly the only system of elementary instruction having in it the germs of the highest appreciation of music, as represented in the works of the great masters whose names are given above. It is the peculiar merit of the system, that while it has in it this high reach of ultimate possibility, it is also incomparably the most simple system of elementary instruction which has ever been devised; but it obtains its simplicity through the legitimate operation of accurate analysis, and the separation of advanced principles from those properly appertaining to the rudimentary stages of study.

The second of the misleading notions referred to above is, that the notation of the Tonic Sol-Fa is the main thing in it, and that this is an advantage more than questionable, by reason of its ultimate need of being replaced by the staff notation. The notation of the Tonic Sol-Fa is indeed a great and a unique advantage of it as a system; since in addition to its extreme simplicity, which gave the system its first successes, as will hereafter be explained, it has turned out to be one of the most convenient instruments of vocal science, and has led to an accurate study of musical relations and a classification of them, such as would have been practically impossible in the staff notation. In the opinion of the writer, the notation of this system is better adapted for the uses of the singer than any other that exists; and it is equally certain that the early training of instrumental students would be more musically than usual, if conducted in it. Upon this point, also, there will be more to be said at a later period in the discussion.

The third misleading impression with regard to the Tonic Sol-Fa is that its comparative novelty should be considered a token of its being superfluous, since we already have a science and technic of music hallowed by long usage, and found sufficient for the needs of the great writers whose names adorn the annals of the art. Upon this head, however,

there is a great deal which might be said. It will perhaps be enough for present purposes, if the reader be reminded that the science of music, properly so-called, is of recent growth. Until the time of Rameau, in the last century, there was nothing approaching a systematic discussion of harmony upon philosophical grounds, and Rameau did little more than to open the subject. The constitution of musical relations, the reasons in physics why one relation affects the bodily organism in one way and another in another, this which is the rationale of the science of applying sounds to the expression of feeling, is the growth of the present century and, for the most part, of the third quarter of it—Helmholtz being the leader and the master. Now, upon a priori grounds, in this view of the subject, it would not be out of agreement with what we see in all other departments of science, if in these days when knowledge is multiplied, new and better ways of presenting the rudiments of an art should be discovered ; should indeed be rendered necessary, through the demonstrated incompleteness of methods previously existing. That this is the case in the present instance, may possibly appear in the course of the following pages. All that is here asked of the reader, is that he hold conclusion in suspense, in view of the fact that progress is no more to be dreaded in art, whether in the methods of presenting its rudiments or in manners of accounting for its higher effects, and of analyzing them and demonstrating their essential nature, than it is in matters of every-day life, or in common science, where we see it to abound upon every hand.

The history of the Tonic-Sol Fa movement is full of suggestion. It grew out of the failure of an earnest country clergyman, the late Rev. John Curwen, in teaching his Sunday-school children to sing from the established notation, and the success of the teacher of a mission school in a neighboring city (Miss Glover, of Norwich) in teaching children to sing by note, and correctly, from a simple notation of her own devising. Instead of bothering them with the staff, the transposition of the scale (a very difficult thing to explain upon the staff to the comprehension of children, but an extremely easy thing for them to do mentally, and vocally), she confined herself to the simplest features of the tonal effects comprised in the little melodies she desired them to have at control. She put into her memoranda the place of the tones in key, and their time relations. The mental effect of a melody is the same in one key as it is in another, to the rudimentary intelligence ; it is only the somewhat advanced intelligence that is affected by a slightly lower or higher placing of it in absolute pitch, hence, she gave them only the initial letters of the sol-fa names of the tones ; and for time purposes divided the line into equal spaces, corresponding to beats ; when a time space contained more than one

initial letter, more than one sol-fa tone had to be sung during the beat represented by the time space. The prolongation of a tone through more than one time space was represented by means of a dash in all time spaces through which it was desired to prolong the tone specified by the last preceding letter. Thus, the scale in triple measure, one tone to three beats, would be represented as follows :—

| d : - : - | r : - : - | m : - : - | f : - : - | s : - : - | l : - : - | t : - : - | d : - : o - |

The same, four notes to a beat, in double measure would be represented thus :—

| dr, mf: sl, td | tl, sf: mr, dr | d, :—, | . :—:

Whatever pitch might be desired for this passage would be designated by the expression, "Key of D," "Key of G," etc., before it. This simple expedient having fallen under Mr. Curwen's notice, he immediately saw its availability, and at once introduced it into his own school, whence in time it spread wonderfully, until at the present it covers England, and has wide ramifications throughout almost all other parts of the civilized world. This device of relieving the singer from the ambiguity of the staff notation, in so far as regards the key relationships of tones represented by it, was not a new idea of Miss Glover's; as far back as 1742 that brilliant genius, Jean-Jacques Rousseau, presented a memoir to the French Academy proposing to accomplish the same thing by a notation composed of numerals, like that which some of the readers may remember as what was known in 1850 as Day & Beall's "One Line System of Sight Singing." Rousseau's project came to nothing at the time, and he missed the credit he expected from it, through the opposition of Rameau, who was then at the head of the musical profession in France. The system has since been revived and now there is a French movement known as the Paris system, corresponding to this of the Tonic Sol-Fa, and duplicating many of its successes.

The Tonic Sol-Fa as at present organized consists of three elements, which for present purposes can be considered separately, although they are to a considerable extent interdependent, as will appear later. The first of these, the more obvious to an outsider, and the one which has encouraged all the rest and, in fact, made it possible, is the notation already described. As given above it is already adequate to the representation of nearly all simple music, such as children and common singers are likely to use; in short, to what is called "People's Song," where melodies confine themselves to one key throughout their whole duration. Modulations into the dominant and subdominant, or the relative minor, are representable without difficulty, by means of suitable initials or abbre-

viations for the tones indicating the modulation. For instance, to write fe instead of fa, gives the singer the clue to the sol-fa name "fe" (Mr. Curwen anglicized the spelling of the sol-fa syllables), the name of sharp four, the sign of modulation into the dominant; in the same manner say tay for te, the sol-fa name for flat seven, indicate the modulation into the subdominant. To this point all was easy, and it is open to inspection, that when the singer has for a certain phrase, such as "do re mi" for instance, only one possible way of writing it, in place of the fifteen ways in which the staff notation writes it with signatures in a single clef (with an endless number of possible ways in reserve, for cases of emergency, where remote modulations have been made), he has something that he can read without the slightest difficulty, provided only that he knows the tonal relation signified by the expression "do re mi." Teaching music in this notation resolves itself mainly, and almost exclusively, into *teaching musical relations themselves*; whereas in the usual way, the main difficulty is that of teaching the *notation* of music. This commonly takes up all the time, and is so poorly done in a majority of cases, that scarcely one of our ordinary choir singers is able to write out a simple melody from hearing it sung, unless they happen to have enjoyed instruction in musical composition. In the Tonic Sol-Fa examinations, on the contrary, the candidate is required to be able to write down a church tune in four parts, after having heard it sung through twice to the syllable la, by four singers, at the rate of sixty notes a second. For the advanced certificates, this is enlarged to modulations containing two removes from the key, and finally to four removes. That is to say, the advanced certificate of the Sol-Fa College expects the candidate, who is ordinarily a choir singer, or a young teacher of singing, to write correctly, after twice hearing as above described, a church tune of ordinary length, modulating as far as from the key of C to that of A flat; or from E to C sharp major. The present number of certificates in force to candidates having passed this test is stated to reach to 50,000.

The last sentences have brought into view both of the other two elements principally operative in this movement, namely, the thoroughness of the system, its completeness, and the organized system of examinations and certificates of attainment.

If the leaders of the Tonic Sol-Fa movement had been uneducated men; or if they had lived in a country possessing less cultivation of music among the higher classes; or, yet again, if the natural disposition of the lower classes there to imitate the higher had been less operative, it is quite possible that the Tonic Sol-Fa might have remained what all the attempts at something similar in this country have remained, namely, for

the use of the ignorant, and for the expression of such musical relations only as are in demand for this class of the population. Fortunately, it happened differently. Mr. Curwen was an educated gentleman, a clergyman, a natural organizer, a man of great liberality and breadth of view, and a philanthropist. He soon found himself at the head of a considerable following of singers able to read diatonic music without difficulty, thanks to the simple instrument of this notation, and desirous, as he himself was for them, to be introduced into the music of Haendel, which for a century and more has held undisputed sway over the hearts of Englishmen. Upon experiment it was found perfectly possible to adapt this notation to the representation of the tonal effects in the "Messiah" and several other oratorios. This immediately opened these works to a class of working population, who, under the usual system, would never have had leisure for learning to sing them understandingly. For a long time the movement spread in the lower strata of society, where it was of the very greatest importance, since it afforded working men a pleasure previously denied them, and the elevating influence of noble texts combined with some of the noblest music that heart of composer has ever conceived. But in such a progress going backward is as impossible as it is to stand still. One thing led to another, until at the present time all the chief works of choral music are published in large quantities in this notation, including such works as Gounod's *Mors et Vita*, etc. Before this was possible, the notation had to undergo thorough readjustment. The representation of the diatonic contents of the key was simple enough, and remained so. But the trouble came in when remote modulations and enharmonic changes came to be represented, such as are in constant demand in modern works. In accomplishing this, the leaders of the Tonic Sol-Fa movement were obliged to study the nature of tonal relations from the foundation, especially these elaborate and misleading relations of many of the modern composers. They had to avail themselves of the discoveries and conclusions of Helmholtz, published just in time. This great philosopher had arrived at the conclusion, as a result of his investigations into the nature of tonal perception, that tonal combinations for musical purposes are thought in key, that is, that the selection of a particular body of pitches, as the musical scale, is the work of the æsthetic judgment, depending upon the manner in which the pitches so related are able to affect the organism; all of which, in turn, must be capable of physical explanation and justification. In his great work he showed that the musical scales of mankind, from the beginning, have been approximations to the leading types recognized by modern musical art, and explained by modern musical science. The investigations of Helmholtz

into the nature of tone, the manner of its perception, and the reason of its agreeable or disagreeable effect upon the human ear, were made accessible to English Sol-Fa-ists in Mr. Curwen's *Musical Statics* several years before they reached elementary musical theory in any other form, and several years before Helmholtz's book had been translated into English.

Nothing is more striking in this progress than the fact that a musical movement having its early operation among what are called the "lower classes" should have gained headway in so short a time, and should have resulted in such a development of musical taste as to render the propriety of providing tonic sol-fa copies of these advanced works a practical question. In this country we have had nothing like it. For fifty years such names as those of Lowell Mason, Thomas Hastings, Wm. B. Bradbury, George F. Root, and the like, have been recognized as leaders in American musical education. Lowell Mason, indeed, was a man of remarkable mental powers, a great educator, and with no small capacity for organizing. His work had the effect of making music practicable, and well thought of, in a country where without some such commanding presence as his it might have remained unknown for a considerably longer time; but it did not lead to the study of oratorio music, or any of the higher class of music upon a popular scale. No doubt he went as far and as fast as his public would follow him. In one of his singing books, the "*Cantica Laudis*," he went beyond them, the contents of it proving of too high a character for the uses for which it was intended. There was nothing in elementary instruction in those days preparing the beginners for musical ideas of this grade. He also introduced a large number of classical choruses from the different oratorios of Haendel into his "*Boston Academy Collection of Choruses*," and thereby brought such treasures as "*The Horse and his Rider*," the "*Hailstone Chorus*," and others, within the reach of ordinary country singers. Within their reach, that is to say, in so far as the accessibility of printed copies is concerned. The cult of Lowell Mason did not have in it the germs of the higher musical taste. This appears incontestably from two circumstances: In the first place, his followers, among whom Dr. Root stands at the head, have not gone so far as Dr. Mason himself in the popularization of classical choruses. Several of the best in Mason's collection are wanting from the later books; nor are they replaced by better ones of more recent date. In the second place, it is only necessary to compare Dr. Mason's "*Music Teacher*," his handbook of that which a young teacher ought to know, with Mr. Curwen's "*Musical Statics*," which occupies the same place in the Tonic Sol-Fa system, in order to discover that while the latter has in mind the very farthest limits

of musical science, as shown in any master's works, or as discovered by Helmholtz, the former had in mind only the commonplaces of rudimentary musical education which, in this case, as already pointed out, did not have in it the germs of the higher life in music.

Here, again, we come upon one of the advantages of the tonic sol-fa notation. The common objection to this notation, that it fails to assist the singer by presenting a picture of the ups and downs of the melody, is, in reality, one of its chief advantages, especially for the purposes of early instruction. Precisely because it does *not* do this it renders it indispensable to singing from it that the singer be able to form within himself a clear idea of the relation of his coming tone to the one he is in the act of singing, and to all those which in the course of the melody he has sung or will sing. Hence, the emphasis of teaching, of necessity, had to be put upon the development of a musical consciousness in the pupil, *the ability to think music*, in the sense of forming a clear conception of every step of a piece, as to its harmony and melody, as well as its time; so clear a picture that after reading over the notes of a short piece the reader could write it down again from memory. The whole system of ear-training in this system is different from what it is in ordinary elementary instruction. Perhaps it would be nearer the truth to say that in ordinary instruction ear training is neglected entirely. In an ordinary singing class the pupil is trusted with only a few of the tones of the scale at first, and those taken consecutively. While it is scientifically exact to say that there is not a tuner in the world able to tune four consecutive notes of the scale correctly without trying them by their harmonic bearings, or to tune the same ascending series of diatonic tones four times over, on four different instruments, in such a manner that any two of them will agree with each other, although the first note of each series had started from the same tuning fork—these elementary teachers think that inexperienced singers, with unsteady vocal organs and untrained ears, can be taught to sing the first five notes of the scale correctly without the aid of any harmonic bearings whatever, or without being taught to listen for the sympathy of sounds in part singing. This is because the ordinary elementary teacher of singing and those who furnish him his professional outfit ready made are themselves ignorant of this fact.

The tonic sol-fa teacher begins on an entirely different plan. His early lessons are confined to the tonic chord, the tones of which he tunes one against the other, the class singing in parts. When any tone of the chord can be held truly in harmony with the other tones, the singers change parts, and skip about from one note of the chord to another. Their attention is called to the mental effect of the different tones, a

guide which is found as sure to the phonations required in singing as it is to the phonations required and used in speech.*

When tones of the tonic chord are formed in the pupil's mind, and he has acquired a certain degree of familiarity with them, he is put to the tones of the dominant chord in the same manner, and then of the sub-dominant chord, and then of changes from one to another. In this way the pupil learns his harmonic bearings and the rudiments of harmony while he is learning the scale itself. It is, of course, open to the controversialist to say that this is an elaborate method, an artificial method, more difficult than the good old method, and all that. It happens, however, to be exactly the manner in which the tones of the musical scale are obtained in the first instance. The tones do me sol do stand there in the relation of 4, 5, 6, 8, as to their vibration numbers. Sol se ray stand in the relation of 4, 5, 6 to sol, and fa la do stand in the relation of 4, 5, 6 to fa. This is the origin of these tones in the scale. The first three are partial tones of Do; the second three are partials of Sol, and the third are partials of Fa; hence, in proceeding as it does, the Tonic Sol-Fa system proceeds exactly in the same way as a tuner would proceed to tune these tones in pure intonation, and exactly in the same order as the mathematician would proceed in arriving at the mathematical constitution of the different tones. Indeed, it is upon the harmonic side that this system especially and brilliantly distinguishes itself from all other systems of elementary instruction in music. To this source, moreover, is due its unexampled influence upon the musical taste of those who study it, as evinced in the demand for the higher kinds of music at what in other systems would be regarded as preposterously early stages of the instruction. No consonance or dissonance is introduced to the class without its nature being carefully analyzed, its mental effect cognized and indexed, as a means of reproducing it at call.

The notation of the Tonic Sol-Fa proved of the very greatest use in the labor of analyzing and classifying chords and harmonic relations. When every chord had been analyzed in regard to the relation of the

* The phonations of speech are controlled by what is called a "phono-motor centre," which presides over and regulates the necessary contractions and oppositions of muscles, in obedience to the inner conception of a particular combination of sounds required. The formation of this habit of obedience upon the part of the muscular and nervous apparatus to the inner conception of sound, and the provision of the agreed-upon combinations of sounds available for the communication of thought, are the two processes included under what we call a child's "learning to talk." As a child talks a long while before he learns to read, so he should sing and think singing, before he is called upon to read memoranda representing the singing of others.

tones to each other, and the chord as a whole according to its relation to the other chords in the same key, the singer began to be a musician. The notation was his best friend. Instead of confusing his untrained perceptions with the impression that the chord of G, for instance, is always the chord of G, and therein a simple harmonic unit, representing a distinct and single tonal effect, the tonic sol-fa gives him the "chord of Doh," "chord of La," "chord of Fa," etc. Each of these is a distinct musical effect, cognizable and conceivable as such. The chord of G may be any one of them, and a knowledge of it as such is therefore no aid to placing the voice upon it or in any part of it. Moreover, the notation reduces the musical entities necessary to be mastered to their lowest terms. When the major scale and its harmonies has been mastered, and digressions out of it into other keys have been mastered to four removes, the singer has a vocabulary of musical concepts capable of carrying him through most that passes for advanced music. When once the starting point is fixed, whether upon D, E, A, or any other pitch, the remaining steps are the same to the singer's consciousness.

Moreover, these analytical processes also led to a classification of dissonances, reducing them to a comparatively small number. Similar processes of comparison, analysis and classification were applied to rhythm by the French time-names until large choruses taught in this system were able to sing together at sight without any of that dragging feeling inseparable from all other choruses reaching into the thousands.

Perhaps in no one point was the generalship of Mr. Curwen more manifest than in the means he employed for attracting the attention and recognition of the higher class of musicians; the most of whom, from natural conservatism, and perhaps occasionally from professional jealousy, had been at first contemptuous and later distinctly hostile to the new system. He had a twofold problem to solve: It was to convince the public of the value of his work, as a rapid method of learning to sing, a method whose validity declared itself beyond reproach when tried by the only musical criterion in England at that time, namely, the music of Haendel; and, second, it was to convince the profession that his work, in spite of its doing away with the staff and the customary pictorial representation of the pitch movement of a music piece, nevertheless had in it the elements of music itself, and the germs of a genuine musical taste, which, when once set to work, could be depended upon to carry its disciples to the full extent of their individual aptitude for the higher forms of musical discourse. In solving one of these problems he had at the same time solved the other. For his plan was to afford sight-singing tests, in connection with performances of standard choruses or whole oratorios.

In order to secure sight-reading tests which would be accessible to a large chorus, and beyond question as to their genuineness, there was only one method. It was to have anthems written especially for every one such occasion as it occurred ; these when privately printed, with suitable precautions, and distributed to the singers upon the stage and sung under the eye of the composer himself, would subject the system to the most severe tests ever applied to any system of elementary instruction. This, accordingly, was done, and the writers were selected from the most distinguished native or foreign musicians at the time in England. So particular was the management to secure real sight reading, that one of the participants relates that when the parts were distributed to a large chorus of two thousand or more, at the Crystal Palace, the singers who received their copies first were not allowed to look at them, but were obliged to hold them below their desks until all were served, when, at a signal from the conductor, all the copies were raised, and after a short space (of five seconds or so), sufficient for the singer to glance through the notes, the chord was sounded and the performance begun, without any support of accompaniment whatever. These tests, continued year after year, had the effect of bringing one eminent musician after another into respectful recognition of the system, if not into the attitude of positive approval.

Quite recently the system has made a distinct gain toward general currency as a result of the competitive examination conducted in the public schools of London. The grant of funds for defraying the expense of teaching singing in these schools, was made conditional upon the attainment of certain results, in the way of sight reading, musical intelligence, etc., the teachers being left entirely free to employ any system they chose, subject only to this crucial test of its producing the results required by the act. After some years of this experience, it is found that out of several hundred schools in London teaching singing, only one still retains the staff notation in the early steps ; all the others employ the Tonic Sol-Fa.

There is a slight ambiguity in the attitude of the Tonic Sol-Fa authorities toward the staff notation. It is seen that while the certificates require the staff notation in the higher grades, and permit it in the lower, thus conveying the impression that it is desired that the staff notation shall come into common use, it is, nevertheless, true that a continually larger number of important works are published in the simpler notation. This is done by outside publishers, who would not do it unless they saw a distinct demand for it, and it is also done by the Tonic Sol-Fa publishing house itself. The explanation of this provision of tonic sol-fa books in the higher grades of music is to be found most likely in two facts : First, the tonic sol-fa notation helps the singer more and

more as his music gets complicated. Whereas singers can guess with sufficient accuracy at the staff notation of simple music, confined mainly or exclusively to its own principal key, it is impossible for them to do this with any success when the music is elaborated, especially when it is elaborated upon the harmonic side, and in the direction of enharmonic changes and the like. When they have this kind of music to deal with, ordinary singers either fail to sing it at all, or else learn it by ear from the pianoforte; not one in many hundreds is able to read it. In the Tonic Sol-Fa notation, however, the greater part of the difficulties in it are already explained to the singer's comprehension. Every modulation is clearly written out in the notation, and the bridge tone is clearly pointed out, upon which the singer must make his mental change of key, the bridge tone serving as the link to enable him to get his bearings in the new key from this particular place in the old. For instance, suppose there is a change to the major third below, flat six of the old key becoming one of the new. In this case "do" of the old key, becomes "mi" of the new; all the singer has to do, therefore, when he sees a "d" and a "m" written together, the "d" as the exponent of the "m," is to sing the syllable d'me, and to go on from that point in the new key, until the return is made to the original key, where he will be helped again in a manner precisely similar. From the two reasons already mentioned, that is to say from the maturity of music taste fostered by this system, through its clear analysis of musical effects, and its familiarizing the ears with them, and from the fact that this notation helps the singer so much, it would seem to follow that these books in this notation would be more and more in demand, as the prejudice against them became less and less, which it is bound to do through the operation of the competition already referred to. There are few singers, it is to be supposed, so controversially inclined as knowingly to use a more difficult notation in place of an easy one, merely as a matter of musical orthodoxy.

While this notation presents these advantages to the singer, it is far from doing so to the player, and this from several reasons. The lack of pictorial quality is a great disadvantage to a player reaching after complicated passages in the Tonic Sol-Fa notation, for in this he cannot play anything until he has clearly thought it out in its relation to a given tonic. Instrumental music, on the other hand, contains many passages which are played without thought, merely upon automatical principles. These passages have the character of arabesques, or sequences of a given pattern; when once the pattern has been recognized, all that is necessary further, is to repeat it over and over upon different degrees of pitch, and in different parts of the key. In this way, especially if the rhythm also

happens to cross the pattern of the motive [as when a six-tone figure is made out of a four-tone motive, a common thing in Chopin and later writers], passages of great apparent complexity are developed, having the same relation to the musical discourse proper that trimmings, and flounces, etc., have to the dress; they beautify, and perhaps emphasize, but furnish no part of the actual duty of the clothing in protecting the person. This entire class of passages is outside the province of the Tonic Sol-Fa; it contemplates only the actual subject matter of the discourse of soul, that part of it which represents musical thought. It is to be observed, further, that the notation of the tonic sol-fa is not adapted to representing the complications of rhythm common in instrumental music, and perhaps essential to it, certainly essential to many of its characteristic effects. Such involutions of rhythm as are found in almost any difficult piano piece are impossible of clear representation in this notation, whereas in the ordinary staff notation they present to the eye a perfectly clear picture. This is still more true in proportion as the rhythms become complicated. While a pianist can read easily the rhythms of the variations in the last sonata of Beethoven, conceiving instantly the relation in which each unit stands to the fractional units smaller, if they were to be written in the Tonic Sol-Fa they would present a hopeless muddle, and if readable at all, would be so only after long study of them, and a slow puzzling out of their meaning, such as, of course, would be utterly destructive to rapid reading.

In fact, it may as well be said now as ever, that this simple notation is not adapted to instrumental music at all, certainly not to that requiring more than a single voice part. For flute, or violin, it might do; for the pianoforte, never. It is also to be said that for the higher kinds of choral music, especially that which modulates excessively, the tonic sol-fa notation hinders cultivated singers rather than helps them. The limit of helpfulness on the part of this notation, is reached when the modulations of the piece to which it is applied occur too frequently, and are intermingled with diminished sevenths, and other chords of ambiguous harmonic relation, many of them the offspring of the tempered scale, rather than of a pure musical theory. In these cases it is more trouble to readjust the consciousness to a new key every few seconds than it is to learn the music by ear, and pretend to read it from the staff notation, which is the usual manner of chorus singers concerning it. Still, in this department, it is to be observed that the tonic sol-fa notation brings this class of music within the rather slow reach of a class of singers of inferior capacity, who would never reach it in any other way.

As a matter of fact, however, the precise status of some of this new

choral music has yet to be determined, as to its place in the mathematics of music, its standing upon aesthetic grounds, and the method in which it ought to be taught. Those whose musical phantasy takes these weird forms do not appear to be able to explain the method of it to those to whom at best it is a foreign tongue, although, as they hope and occasionally measurably believe, intelligible. Meanwhile the Tonic Sol-Fa has honestly earned its standing as an important factor in musical education, whose value it is too late to call in question.

It is no secret to the well informed that elementary vocal instruction has been at almost a complete standstill in America for a number of years past. The common school training, instead of turning out singers able and desirous of taking up music of the finer varieties, has proved itself a complete failure.

Many hints of the introduction of the Tonic Sol-fa in this country have been made at intervals during the past ten years, and about eight years ago Mr. Theodore F. Seward, of East Orange, New Jersey, formerly secretary and assistant to Dr. Lowell Mason, took hold of the matter in earnest. For a long time he had no success whatever. The American prejudice against any kind of a notation different from the staff stood against every effort, like a solid wall, so dense, and so inert that eminent musical scholars, well convinced of the necessity of reform, were afraid to go into it lest their reputation for orthodoxy should be impaired. In striking contrast to this attitude of the majority of musicians of the middle grade, a few of the highest eminence have now declared themselves in favor of the movement, for the very reasons adduced above, and the prospect is that within a comparatively short time the movement will acquire a headway in this country analogous to that which it has so well made in England. For my own part, I am in favor of it, and have been for twenty years. Among the musicians of the highest class who have declared themselves in favor of the Tonic Sol-fa are such well-known names as those of William Mason, Music Doctor; E. M. Bowman, President of the American College of Musicians; A. A. Stanley, S. P. Warren, the composer and organist; Clarence Eddy, Mrs. Hershey Eddy, etc. The ultimate success of the Tonic Sol-fa in America, however, will turn on its ability to produce better results than can be produced without it, and to produce them more rapidly. Its principal need at present is a fair field for competitive results.

May 24th, 1888.

CHAPTER X.

SELF-CULTURE IN MUSIC, ITS POSSIBILITIES, ITS METHODS, AND ITS LIMITATIONS.

In this time, when music schools are so abundant, concerts of good music so numerous, when music makes so large a part of general education, especially of that of young ladies, it may seem strange to say that the greater part of the work of becoming musically cultivated still remains to be done by one's own exertions. In this respect music does not stand apart from the other branches of education. The most that a school can do for a student is to teach how to apply the mind, and to awaken or strengthen the appetite for knowledge. Besides this, it attempts no more than to afford a few elementary conceptions in every department, in order to ensure the successful beginning of applying the mind to the acquisition of farther knowledge; hence, it remains true in every department, that the best parts of every man's education, the ripest parts of his experience, those elements in his professional outfit which chiefly distinguish him above his fellows, are those which he has learned by his own study and reflection. In every department of effort it is always and forevermore true that experience keeps the best school, although it is equally true that comparatively few are ready for admission to the higher departments in it. The old adage that "experience keeps a dear school, but fools will learn in no other," might as well be amended to read, "few *can* learn in any other." If this is true of the branches of general education, in which instruction has been systematized and placed within such easy reach of aspiring pupils, how much more is it true of the arts, which in their nature do not admit of this exact classification, this accurate analysis, and this definite statement in terms which logic will approve. It has happened in this country, and the same is true, to some extent, of every country, that the aptitude for art often exists in quarters where there is no one for a long time to recognize the bud of promise, no one to care for it, still less any one to train and direct it properly and see that suitable conditions are afforded for its due unfolding. When musical instruction is accessible to a student of artistic powers, it is not always the case that the teaching itself is of artistic quality; and it some-

times happens that it is of such perverse quality as to misdirect the talent and retard the final arrival at the desired haven. But at the best, when the school has done all that it can, when it has trained the promising powers according to the best light of the pedagogic of the day, there will still be left an immense amount for the student to do by his own exertions, the greater part of which it will not be possible for him to do until he has had the farther growth of experience, self-criticism, and contact with the world. Whether he will play, or compose, or merely teach the best that others have composed, it is one thing to know how, it is another to be able to communicate, and still another to convince the world that one is able to do all or any of these things.

When self-cultivation is directed to the study of matters of general knowledge the course is comparatively easy, since the items of general knowledge, of science, history, and the like, are distinctly written in books accessible without great difficulty. But in music or any other art this is not the case. There are a considerable number of books, indeed, containing information about music ; and a farther considerable number containing the written part of the various technics of music—such as the art of playing upon instruments, the art of thoroughbass, composition, orchestration, etc. ; but culture cannot be found in any book, nor yet in any particular assortment of them.

The term "Culture" has been well defined by Mr. Matthew Arnold, as "a knowledge of the best that has been said and done in the world." Now, in music there are two distinct forms of knowledge, between which the student needs to draw the line at the earliest possible moment. They are knowledge of *music* and knowledge *about* music. The latter is not difficult to come by, and with many it takes the place of a knowledge of music, properly so called. Nevertheless, only a knowledge of music itself, a comprehension of it as a form of discourse, and an appreciative familiarity with the best things that have been done within it ; a knowledge of such sort that a single period out of any important work can immediately be referred to its author, if not to the particular work in which it occurs, and a ready recognition of the distinctive styles of all the principle writers—*these* are elements of a knowledge of music worthy of the name of culture. Along with them must go no small amount of this other form of knowledge already referred to, knowledge *about* music. Under this head are included the history of the steps by which the art has reached its present state ; the names, achievements, and lives of the principal composers operative in making it what it is ; an understanding of the different schools of music classified by nations, with an appreciative recognition of the best elements in each. These are a few of the points entering

into such a knowledge of music as to be entitled to the name of culture. When we retrace this list, we immediately discover that it will be impossible for any one to possess musical cultivation in this sense without such a persistent exercise of the mental powers as amounts to mental discipline of considerable range and force. Whatever the original gifts of the pupil, however bright his natural aptitude, and however much the school may have done for him, this kind of knowledge of music will come, if at all, only after maturity, and after long study and reflection.

A farther consideration of the processes entering into the development of this form of knowledge will show, also, the relation of the environment. A student, however gifted, living where musical collections are not accessible, dependent upon his own buying for his library, and upon his own judgment in selecting the works to purchase in the order best adapted to easy assimilation, and not able to hear the finer kinds of music with the frequency and matter-of-course way necessary if they are to enter into the daily life of the student and be assimilated with his growth (just as he assimilates his daily supplies of carbon, nitrogen, etc.) —such a student rarely or never will be able to arrive at the ripeness of musical reflection possible to another of similar powers living where musical interpretations can be heard as often as one likes, and where the best kinds of works are brought out continually. Occasionally a talented young artist will overcome the disadvantages of an environment of this sort, and will evolve out of scanty surroundings a maturity of attainment calculated to put to blush many who have had all the resources of education lavished upon them in vain. Such, however, are the rare exceptions.

There is in music a leaven of the perversity characterizing other departments of human activity, or seeming to the superficial observer to characterize them. Those who have much are those who apparently do not need it; those who have little seem to be the ones who ought to have had the much. Nevertheless, appearances in this respect are often, and it may be commonly, deceitful. The divinity which shapes our ends may not shape them so "rough" as the bad reader of the aphorism made it appear. It is very singular how much food for the artistic aptitude nature contrives to throw in the way of those even living outside of the ordinary currents of artistic supply and demand. A remote country library is found to contain books that one has wished for in vain; it is the same with music. Things apparently the least likely to be met with in the ordinary course of experience, in such a country as this, not infrequently reveal themselves at the hand of the student who is ready to make use of them. It is the same in these days in the matter of concerts. All the great virtuosos, with few exceptions, have been heard in this country, and

the greatest of them have made long tours. It is so with singers; and it is becoming so with those varieties of musical composition which formerly were not heard outside of the largest musical centres. In New York, for several seasons, the opera has been fully up to the standard of the best European capitals. They have been able to control the best singers, a sufficiency of the best players and great conductors. The repertory has not been behind that of the most advanced musical centres of Europe. Even in cities far inland such representative works as Wagner's "Valkyrie," Gluck's "Orpheus" and the best of the Italian repertory have been given over and over again. Theodore Thomas and his orchestra have made artistic interpretations of the masterworks in orchestral writing accessible—in occasional doses, at least—all over the country. Small places in Iowa and other Western States have had this advantage. True, it has been but for a night, yet this was a taste, and it is altogether likely that the taste, in many cases, has been taken merely as a foretaste of a fuller hearing under more convenient circumstances. These things have been carried so far that it is not too much to say that any student wishing to become musically cultivated, and willing to pay the necessary price for it, in the way of application, and quickly availing himself of every opportunity at the moment when it presents itself, may be insured success. It is merely a question of application.

METHODS OF SELF-CULTURE.

It would, of course, be easier if the student desiring to be cultivated could begin the task with a complete road map of the way over which it will be necessary for him to pass, and the various stopping-places, with the different prices of the entertainment therein furnished, and, perhaps, a scientific analysis of the contents or nourishing power of the different musical diets, expressed in musical "calories." With such a "guide, philosopher and friend," he might safely be left to his own devices. Unfortunately, no such facility has yet been provided for musical students, and it is altogether unlikely that anything of the sort can ever be done. For it happens, in this work of traveling toward Parnassus, that every one needs go the shortest way; and as individuals are born at all sorts of degrees of exposure toward Parnassus, and at all sorts of distances, every one has to go his own way, or lose time by retarding his steps to accommodate the pilgrims along the established toll roads; that is to say, by the conservatories and schools.

In order to get to the top or well up the sides of Parnassus, the main thing and the first thing is to start; the next is to keep going, and to be sure that the way is one leading to the destination desired. It is to be

presumed that the average student will begin his actual acquaintance with music through the convenient but not always discreet medium of the pianoforte. The literature of this instrument is now so well mapped out, and the art of playing upon it so much a common property, that this part of the course may be left largely to the natural course of events. The instrument, however, is peculiarly liable to abuse in the pursuit of mere technic. I have elsewhere in the present work expressed the conviction, now too general for me to claim personal property in it, that a great deal of time is wasted, and worse than wasted, in the practice of merely mechanical exercises and studies of a misleading quality—having a form of music without its substance. Upon this point the student will do well to read in the proper place.* There is one aspect of piano practice, however, which it may be well to touch upon in the present connection. It is the relation of technic to the pursuit of musical culture. So long as the pianoforte remains the student's principal means, and his most convenient means, of familiarizing himself with the tone poems of the principal writers in the art of music, an ample technic will be of great use to him. But the best way of getting it will not be that of confining his practice to exercises and studies for a series of years, expecting all of a sudden, as it were, to come to the ability of playing musically the finer kinds and more difficult forms of musical discourse. If one is to become a fine pianist, it is necessary for the hand to be formed to the more elaborate uses of difficult pieces as early as possible, at least by the age of sixteen. Up to this age the student is full of energy and the confident ambition which has never known failure. Under the stress of novelty he will advance with great rapidity, and at an early age, and after a brief experience, little less than shocking to pedagogues, the talented ones will show themselves able to play most of the passages and difficult combinations in the concert repertory of the pianist. Mature interpretations are a matter of later acquisition. Immaturity is no objection when it goes along with youth. Hence, it would be a mistake for the student to confine himself too long to the more easily appreciated movements of the great masters, to the neglect of those not so immediately practicable or understandable. Generally, however, this matter may well enough be left to correct itself, the ambition of youth being usually sufficient to lead the student into quite as many experiments with difficult music as it would be useful for him to attempt. The caution is made here because there are many students ambitious but not quite so courageous, and it may be rather orthodox in their turn of mind, who, without outside encouragement, would not

* "On the Use of Studies in Piano Teaching."

venture to attack the only music likely to impart to their technic the flexibility and fluency so highly desirable for rendering their interpretations of the more poetic music easy and grateful.

The order of composers in the general study of music may be left to the student's appetite. If he happens to be in a state where nothing but Mendelssohn satisfies him, let him play Mendelssohn; if nothing but Beethoven will do, let it be Beethoven; if Chopin happens to claim his fealty, let it be Chopin. There is no good composer whose works are not worthy of more study than the average student is likely to give them. It is very possible that under the action of the spasms of enthusiasm for some one composer, the student will totally neglect all other composers for a time; after a little the enthusiasm will wear itself out and some other composer will claim his allegiance in the same exclusive and unintelligent way. What of that? Every step is toward Parnassus, and if the traveller happens to go upon one foot, and then upon the other, for many steps in succession, progressing by hops, the advance is none the less sure, although it may not be so rapid nor so graceful as the usual method by footsteps.

When there happens to be an appetite for some one composer, it is wonderful how nearly right a student will get the readings. Nearly, but not quite. In all these cases of one-sided devotion to a single composer, it is some one phase of that composer, commonly, which, with such exclusive powers, awakens a resonance cavity in the innermost being of the student. The idiosyncrasies of this phase will be exaggerated, and the interpretation will be more or less injudicious. What of this? It is better to have a bad interpretation, which means something to the player, than a merely correct seeming of interpretation, meaning nothing to the player or any one else.

There is a great difference in composers in what I might call the self-evidencing power of their music—Beethoven, for instance. A student with a taste for Beethoven is likely to get nearly right as to tempos and general style of performance. The slow movements seem to come easier than the fast ones to the average comprehension, and there is a period in the career of every promising student when nothing really touches his heart but these wonderful slow movements. In an earlier stage, generally, it is the same with the Mendelssohn Songs Without Words; these, also, will usually be played sufficiently well by students happening to fancy them, whether they have or have not heard them played by great artists. It must be admitted, however, that there are certain elements of interpretation which a student studying alone will hardly ever get right. I refer to the proper delivery of the finer kinds

of melody, especially of Chopin's. These nocturnes and other lyric movements of his presume upon the part of the interpreter a habit of singing in the higher sense of melodic interpretation. The only thing possible for the American student dealing with this kind of music, without the training of ear and musical sensibility derived from much hearing of great singers, will be an approximation, which will be nearer the composer's meaning, according as the student is blessed with natural refinement and taste, and is able of his own reflection to develop such chance hints as may have been afforded by traveling artists.

THE HABIT OF THINKING MUSIC.

It is of absolute necessity that the student, depending upon his own efforts and studies by himself, away from a teacher, should cultivate his powers of conceiving music. It is at this point that many mistakes are made. Almost every student has noticed how much easier it is to learn a piece that one has just heard well played. Why? Because in this case the piece has commended itself to the inner consciousness *as music*, and a conception of it remains and unconsciously (to the student) dominates the practice by which he would master it. This, which happens in the exceptional case, where he has had the opportunity of hearing a piece played immediately before studying it, it is his business to make the ordinary rule of his study. How can this be, it is asked, if one is not living where interpretations of masterworks are the ordinary occurrence of musical experience? When one cannot *hear* music, one must learn to *imagine* music. The ordinary study of a piece unusual in style is encumbered by the length of time necessary for training the fingers to new uses and new positions. In the effort to do this the mind is apt to lose sight of the musical effect, and the conception of the piece is confused in the student's mind by the innumerable stops and starts incident to mastering difficulties. The rhythm goes by fits and starts, and the movement varies without the student being aware of the fact. He is conscious that in the difficult passages he is putting forth a great deal more exertion than he did in the easier ones, but he fails to notice the change in the "motion" when eighth notes have taken the place of quarters, or sixteenths have taken the place of these. He plays faster, indeed, but not enough faster to produce the effect intended. In fact, it may be supposed that a large part of the playing out of time, almost universal among pianists, is mainly unconscious, and due to the direction of the attention to other parts of the operation; in other words, the mind is so busy running the fingers that it has no time to attend to the musical effect. It is the object of the study of music by the eye to correct this. Before practicing a piece,

take it and read it over carefully with the eye, without playing a note. Imagine the sound of every note, motive, phrase and chord ; in short, *hear* the piece in the mind just as it ought to sound if it were played perfectly. At first you will find that you cannot form a clear picture of music read over in this way. You can run your eye over the notes, and parts of it you can clearly conceive, but other parts you will not be able to hear at all, or, if heard, you will find, upon playing them, that the sound is quite different from what you had imagined it. This will be because your inner consciousness of music is incomplete. You do not take into account all the elements of the tonal combinations required by the composer, and you do not take into account sufficiently the influence of movement upon the effect. By comparing the actual sound with the imagined effect, one of them will presently correct the other. Sometimes it will be the imagination which is incorrect ; at other times it will be the playing which is at fault. But unless you learn to run over a piece with the eye and imagine the effect clearly without playing a note of it, your musical consciousness will always be limited by what you are able to play ; in other words, your brains will be of only the same length as your fingers. This is upon no account to be permitted, although it is so common as to be regarded almost as the rule.

Of course the eye itself has to be educated ; but the attempt to read music in this sense is the education it needs. At first you will find it necessary to attend almost exclusively to the melody and the leading traits of the harmony. Later, you will be able to conceive the effects of passages, the added modification of accompanying embellishments, and one element after another, until all the effect intended by the composer repeats itself within your mind as you run over the notes. You are actually to *hear* the music within you, exactly as you hear discourses between yourself and some friend of whom you are thinking.

It is fortunate that the eye is accustomed to taking in a large number of particulars ; hence it easily learns to read music in this sense. The principal difficulty of doing it will be in the musical consciousness itself, which will have to be expanded. It is wholly impossible for an American boy, having been brought up in the country, let us say, and never in his life having heard a dozen pieces of really superior music, to have the same kind of musical aptitude as a boy brought up in the city ; still less the aptitude of a boy brought up in some European musical centre, and especially gifted for the art. The latter will have an amplitude of vocabulary far beyond what the other will come to by years of study. It is the same in music as it is in language. We see the children of families where the parents are lettered and cultivated in possession of a

verbal vocabulary, and of a mature taste in reading, which their neighbors never possess. The surroundings have made the difference. The children of the first family have been accustomed to the use of trains of thought which the others have never cared to go into; consequently they cannot appreciate them, for the reason that specialized brain cells necessary have not been developed.

Nevertheless, the student who is willing to learn need not despair. Although there is no royal road to Parnassus, there is a good traveled way, which he need not miss if he persevere. His progress will be twice as rapid when he devotes a part of his attention to this form of mental training as when he trains his mind only after he has trained his fingers. Besides, for those living remote from interpretative facilities, this form of mental training must be their main dependence. It is their only resource for correcting the imperfections of their execution. With the eye it is possible to run through pieces far more difficult than one can play with proper effect, and to get in this way an educative idea of the sound they would have when well done.

All this, like everything in education, must be done modestly. It will often happen that the student will arrive at a wrong idea of an important work, in consequence of overlooking some element or elements in the interpretation; hence, when he hears it performed by an artist, he will often be disappointed, and it may be that he will venture to take the artist to task for not properly interpreting the author's conception. M. Cocquelin, the eminent French actor, gives an amusing account of an experience of this kind in his own province. It happened upon one occasion that he had to create a new part in a play by Alfred de Musset. He took from the brother of the dead author his conception of the intended effect. This he carefully worked out, and supplemented it by his own ideas, in order to give the character the necessary fullness of detail. As all the critics had taken the precaution to read the play upon the day of its production, and had rapidly formed an idea of their own in regard to this apparently commonplace character, the papers the next morning all condemned M. Cocquelin's interpretation. It was only when the general public came to the representations that the version of the eminent actor began to be recognized as it deserved.

But the student who will diligently endeavor to improve his musical imagination by the exercise of reading music and thinking it silently, as one reads most of the books he is interested in, and continually compares the outward presentation of the same ideas in playing with the effects he had imagined without hearing them, will soon have the satisfaction of finding his imagination becoming more and more vivid and truthful; and

by the same token his playing will also become more musical and less interrupted by technical defects. In fact, there is no exercise better calculated to test the value of an aphorism elsewhere enunciated in the present work, that the principal reason why so many fail to play well is mental and not muscular. He will find that the imagination will form a picture of a variety of shades of expression which the fingers for a long time will fail to reach. Presently, however, they will catch the spirit, and the playing will become more and more delicately shaded.

RANGE OF MATERIAL REQUIRED.

It is not unusual for students to object to the difficulty of educating themselves in music in the manner I am here describing, upon the ground of expense. It is not expensive. Taking the department of piano music, it is possible to obtain for ten dollars all the piano music necessary for forming a satisfactory idea of the range of the imaginations of Beethoven, Schumann, Weber, Chopin, Mendelssohn and Schubert. If one has a good range of the works of these men, he has a musical library already. What would such a list contain? It would have the volume of Weber pieces, Mendelssohn's Songs Without Words, Bach Album, Chopin Album, Schumann's Phantasiestücke, Kreisleriana, Romances, Phantasie in C, Etudes Symphoniques, Album for the Young, etc.

No doubt there are readers who would thank me to say how little one could learn and still have some claim to a knowledge of music in this sense. It is not easy to say this of all, but the following may be taken as a fair estimate for certain parts of the list: Suppose one could play everything in the Bach Album, he would have a sufficient number of pieces by Bach to give him an idea of Bach's style; if he wanted the larger sides of the Bach nature, he would need to add to this the Chromatic fantasia and Fugue, and perhaps one or two of the great organ fugues. Of Beethoven one needs to know the first, third, fourth, fifth, seventh, tenth, twelfth, thirteenth and fourteenth sonatas in the first volume, and the Appassionata, Waldstein, and Opus 90 in the second. Besides these there are several slow movements in the others that are worth knowing. In fact, as piano playing now goes, there is no reason why an amateur should stop short of all the first volume and half the second. The advanced player will find himself able to do the last two sonatas of the second volume without so very much trouble. So in Schumann, if one know the Phantasiestücke, the Etudes Symphoniques, the first two numbers of the Kreisleriana, and a few other pieces, he has a general idea of the range and style of Schumann's tone-poetry. The Chopin Album contains a number of waltzes and mazurkas of no very especial

account. The remainder of the book, however, is a part of the true Chopin cultus. In addition to these numbers the Chopin scholar will need to know the greater part of the Etudes Opus 10, the Polonaises Opus 22 and 54, the nocturnes Opus 27, and that in C minor. If one is able to add to this the concerto in E minor, he must be a good player. So, too, of Liszt, there are comparatively a few works which show this gifted genius at his best. They are some of the transcriptions of the Schubert songs, his Liszt-Wagner album, in the edition Augener, the lovely Gondeliera in Venice and Naples, the Tarantelle in the same work, and, if one is capable of playing it, the Polonaise in E major. The transcriptions of Italian melodies are all of them interesting as such, but they are going out of style. I am quite well aware that this list represents several years of practice and study. But why not? Is not the end of study to learn, and is not the literature of the piano better worth knowing than reams of mere studies by composers lacking in poetry?

Students not yet in possession of an advanced technic for the piano, or coming to this higher study too late in life for their hands to acquire the necessary suppleness and obedience, will find it of great use to study the larger works of Beethoven in four-hand arrangements. This form of study has never attained the prominence in this country that it has in Europe, but besides the advantage of bringing the thoughts of composers within the reach of those who have a soul for music without a hand to correspond, it also tends to form a more strict observance of the time and a better rhythmic swing, and it is possible in this way to arrive at a high degree of expression, although generally it will not be so flexible as the performance where all the fingers are under the command of a single will. But then the trouble commonly is that all the fingers are *not* under the direction of a single will; they do not obey the will at all.

OUTSIDE HELPS TO SELF-CULTURE.

The student working by himself needs to avail himself of as many helps as he can in the way of hearing music interpreted through other media than those in which he usually studies. That is to say, the musical student operating through the pianoforte alone, ought to hear as many operas as possible, and good concerts of fine singing, in order to learn to properly estimate the effect which a voice makes in a melody. To interpret music from a vocal standpoint is a very different thing from interpreting it from a merely instrumental standpoint. With the voice every note is the immediate expression of soul. With the instrument this is not the case. The tone itself is commonly more or less lacking in at least a part of the qualities entering into a perfect tone, a fully expressive tone.

In addition to this element of imperfection innate in every instrument from the violin, which stands at the head of the expressive column, down to the xylophon, which stands at the bottom, there is the farther element of inexpression, due to the lack of soul in the fingers. The human tongue and the larynx are parts of the body which respond immediately to the slightest shades of feeling. The fingers do not do this; they wait to be sure that the feeling is really intended. This is better for them, considered merely as fingers, for if they were as delicate and as full of soul as the larynx they would not be adapted to the coarser uses upon which the maintenance of the bodily organism so much depends. The instrumental musician has to educate the fingers and render them obedient to minute impulses of soul and to imperceptible modifications of the intensity of the current which the larynx obeys without conscious effort. As many who play never think of it in this way, and do not happen to have been endowed with such an amplitude of emotionality as forces every part of their organization into obedience to it, it almost invariably happens that the playing of music upon an instrument is more or less cold. It is the business of the player to correct this as far as possible. One of the means by which he will do it is by hearing music interpreted through other media than that to which he is accustomed. It is for this reason that Schumann recommends his pupils to go into the church as often as they can, and listen to the organ. He had in mind the sustaining power of the organ tone, and the reverberating power, inseparable from those large German churches, but rarely found in our smaller American edifices. The tones of the organ reverberate through all parts of the building, and chords are echoed and reechoed from one side and another, until there is an element of mystery imparted to the music which the soft stops of an organ clearly played close at hand do not possess. It is likely that Schumann intended by this direction to afford a clue to certain effects intended in his piano music, where the pedal is marked so much more often and incessantly than it is usual now to employ it. He liked his music with a halo around it; the echo of a large church is the halo Schumann had in mind.

Opera singing exercises more influence in awakening the latent musical consciousness than any other form of singing, or of music, especially in the earlier stages. This for two reasons: First, the singing itself is more vigorous, and more accentuated upon the emotional side; it therefore stirs the feelings sooner and more powerfully than the colder accents of concert singing. Second, the music itself is more emotional, and the emotional and descriptive attempts of the composer have the great advantage of the scenic effect and the dramatic situation, whereby the

senses of the hearer are moved upon in a variety of ways at once. In this general quickening of the attention, the musical senses are particularly benefited, for under the assistance of the dramatic movement of the play the music of the most tender and of the deepest possible expression is felt and appreciated by the student with an intensity that only the rarest concert performances have power to awaken. Even light opera has elements of educational value for the latent musical consciousness. For, while this class of music deals properly with the lighter moments of expression only, it does this with so much cleverness and so much brightness that the musical consciousness is stirred and taught to love *something* in music; this is the first step toward loving one thing better than another, and this, in turn, toward loving *the best* in its equitable preëminence. In fact, it is often a disadvantage for an immature student to hear the higher forms of music at a time when he is liable to jump to the conclusion that he possesses no love for them. This, however, is more local to the individual than to the general danger of hearing too much good music. No matter how immature the student may be, if he hears in a proper spirit he will pass over many things which, although not intelligible to him at the time, will afterward clear themselves up in his consciousness; or, perhaps, awaken into consciousness through the impetus of some similar experience at a later time, just as the picture can be developed in the photographer's cabinet long after the sun has done its work upon the sensitive coating of the glass.

Indeed, the mental attitude of the hearer has a great deal to do with the advantage or disadvantage derivable from hearing the higher kinds of music before one is ready for them. The most singular thing of all, in this connection, is the fact that an attitude of complete indifference is less damaging than one of conscious desire to be benefited. This contradiction of the natural expectation in the case is explainable upon the ground that when the attention is strongly concentrated upon a subject it often happens that the effort is so strong as to prevent the mind from working easily and naturally as it would do if left to itself. For this reason the expected beauties do not appear, and at the same time the wrong direction of the attention leaves the mind impassive to other beauties which it would have perceived and enjoyed if the attention had been left more free.

LIMITATIONS OF SELF-CULTURE IN MUSIC.

The self-made musician is subject to certain limitations which are liable to hinder his success in the strife for position and hearing. The first, and most serious, is conceit. Having found out so many things by his own efforts, and having honestly persevered in a course of study and

reflection for a series of years, during the whole of which he has not once come into contact with a similar mind educated in the same direction according to the discipline of thorough schools, the natural confidence in his own powers, innate in every mind, becomes unduly strengthened ; and in many cases he acquires an offensive air of competence, not always justified by its foundation. I do not speak here of the conceit peculiar to small minds, and belonging properly to ignorance, but of the confidence in his own powers which a self-made man invariably has, and which, in fact, has been one of the factors in the perseverance making him what he has become. This self-confidence has its good side ; in fact, musical progress has been enormously indebted to it in all stages of its history. Nearly all the great masters were self-made men. Especially is this true of the great reformers. Gluck, Lully, Rousseau, we might say, Haendel, Beethoven, Haydn and Wagner, are a few examples in point. No one of these men ever pursued a college course, or was honored with a degree. They arose from the common people, or they were diverted from other studies by their great love for music. They had lessons from masters, indeed, to a limited extent ; but no one of them was able to pursue his lessons until the master was ready to pronounce him duly qualified in the branch immediately in study. It was, in part, the freedom these men enjoyed from the authoritative prescriptions of schools which left them in possession of the hardihood and courage to examine all the artistic practices of their predecessors, one by one, and to weigh them anew in the scales of absolute truth and justice ; thus they learned to prize where honor was due, and to reject where falsity made rejection the proper measure. In fact, there are two circumstances in this connection which are worth studying seriously, though I am not sure whether we will be able to draw from them any adequate conclusion. The first is the practical schooling which these great musicians had. Think of the young Beethoven in the orchestra at the age of thirteen, an assistant leader at the age of fifteen, and a composer only at the age of twenty-one ; all the compositions dating previously to his settling in Vienna, at the age of twenty-one, Beethoven threw away. Consider Wagner, an operatic director at the age of nineteen ; a composer upon his own account only at the age of nearly thirty. Haydn was all his life a student, and it is likely that no one was more surprised than he to discover, at the age of fifty, that his fame had reached England, and that a tempting offer was thought of in order to induce him to visit that country and bring out certain of his works there. It was in the exigencies of daily practice in the routine of directing that these men learned the minutiae of the sound of instruments in their various combinations, and the effect of the slight modifications

necessary for adapting the works they had in hand to the resources and peculiarities of the performers. By this schooling they had what was, in fact, an apprenticeship to the career of an operatic orchestral composer, and I do not think that any other school would have been of so much service to them. Conservatories are undoubtedly useful, as a convenient way of introducing young composers and students into the practices regarded as orthodox in music, but it is of the nature of a school to be hyper-orthodox, and to run into routine. Schools also have an affinity for the smaller kind of minds, because it is minds of this calibre which hold to orthodoxy with the greatest tenacity. Minds of the larger class, indeed, are apt to be heterodox, both through their own ability to weigh anew the practices of antiquity and judge them upon their merits, and also through the self-assertiveness appertaining to mental powers of a high order. The latter part of their heterodoxy commonly disappears with maturity, when the faculty of reverence has come into due exercise, and the reasons of one sort or another begin to be felt for the practices which at an earlier stage of the individual development were held in contempt.

Education has not yet succeeded officially in uniting the advantages of schooling with those of the apprenticeship system. In a school one learns by prescription and rules; in apprenticeship one learns by actual working at the making of the product. Rules, if learned at all, come only as a tardy explanation of processes previously acquired and in constant demand in turning out the finished product, whatever it may chance to be. The two methods have compensating disadvantages and merits; the school is apt to run into mere theorizing and knowledge about *how* a thing ought to be done; apprenticeship is liable to run into a mechanical routine, unilluminated by any principles whatever. The product of the education of apprenticeship is, therefore, apt to remain practical but unintelligent; that of the schools, on the other hand, is apt to be merely theoretical and without practical availability in daily affairs. The great musicians above mentioned had enough of school training to hinder them from remaining mere mechanics, and the practical training of the orchestra was exactly that best calculated to strengthen their powers of musical fantasy and to afford them maturity of exercise in the technic of musical expression.

The self-made musician in America, however, does not have a self making of this sort. He begins in an atmosphere of meagre musical impressions, and when his mind turns to the art of music as the expression of an appetite not to be appeased, he does not find at hand the musical stimulation proper to the development of his talent, but, instead of it, is

obliged to content himself with a study *about* music, musical history, the lives of composers, and such ideas of interpretation as he can form by himself. Hence, if by industry he masters those parts of musical theory precedent to musical composition, and undertakes to exercise himself in the higher departments of production, he is obliged to do so without the education of ear which would have resulted from a practical experience in an orchestra, and without the discipline of hearing a wide range of music of his contemporaries. The result of this system is seen in the production of sonatas and sonatinas for the piano, modeled after those of Clementi or Mozart, a prelude, and an occasional song without words. The classical form is successfully imitated, in so far as regards the periods and the contrasting keys of subjects; but the inner life of music is not in the production. The reason being that the composer had not come into possession of a spontaneous musical fantasy, reflecting automatically every mood of the environment. The music of these musical scholars has in it scarcely anything of the life of the day. It is the product of reasoning and of close reflection. The difference between it and the spontaneous and vigorous utterances of a promising European composer are apparent upon comparison. The heartlessness of this artificial music is also felt by the public, which receives it with complete indifference. It is the object of music to express the beautiful in tones; music which does *not* do this has no claim to be called music.

A regular education in the best schools has in it two elements which self-education misses, and misses more and more as the self-made man advances in life. There is a world of little technicalities and traditions in every art and trade, communicable only by oral transmission—little things which every practitioner knows, but which no one knows exactly how to put into books. This is true of every profession, especially those of law and medicine. It is still more true of music, where the producing is done by one class of minds, those which are distinctively musical; and the text-books are made by a different class, those which are intellectual and analytic. The latter are often unable to grasp the elusive minutiae of art, or, if able to discern their exercise, not finding it possible to refer them to definite principles, they ignore them altogether. Through the operation of tradition and minute personal anecdotes, received from the teachers in moments of informal correction of exercises, the scholar in a school comes, to some extent, into communication with the leading minds of the profession, or, at least, with many small points of their practices which he never could have learned from books; the great masters become living presences to him, and, in addition to this, he comes into personal relation to the bright students of the same school who are already begin-

ning to attract attention. Later, their having come from the same school renders their works attractive to him, and this, in turn, lays for him a foundation of friendship with prominent musicians otherwise unknown to him. This is especially the case with those who happen to attend a great school in its heyday of prosperity, when the tide of life is running so full as to draw to its vortex the most vigorous minds of the gifted youth. At the school, in this period of its development, are laid the foundations of acquaintanceships and friendships which afterward ripen into productive associations. They are equally advantageous to the less gifted, in bringing them into connection with the leading minds which presently will occupy the posts of honor in the musical world ; and to the leaders themselves, who find in these talented young friends and admirers a public already formed for receiving their works with applause, through the natural pride one has in knowing authors who are beginning to be talked about. Theodore von Kullak's school, in Berlin, was a place of this sort ; Liszt's classes, at Weimar, were of the same order. They were the musical exchanges where the best of the new thought came to be weighed, gauged and valued.

From this kind of contact with others in art the self-made man is shut out. During the years when he is learning, he is also obliged to be earning. This divides his attention to such a degree as to necessitate a closer application and concentration of the attention during the time available for purposes of study ; here, already, there is a limiting of the action of the mind and a premature subjecting it to the impairment of drudgery. But the same hard fate which confines him to toil for the purpose of advancing himself, also restricts him to social circles where this companionship of kindred minds is impossible. A community rich enough in musical life to afford educative facilities for the most talented young minds in the profession, is too far advanced for the ambitious but unqualified young teacher to exercise his money-making faculties successfully. Hence there is a certain want of cordiality, a lack of the habit of companionship, a self-absorption in the self-made man not common in the well-educated man of the world. This is seen in every line of self-culture, and it takes years of success and of well-earned position, where the principle of *noblesse oblige* puts the possessor under a pressure of politeness, before the narrowing influences of this mode of early life will disappear, if they ever do. It is unnecessary to say that the want of the softer features of manner in the self-made man is commonly only skin deep. So is color ; but it serves, nevertheless, to demark men from each other by a barrier impossible to cross over. Enough to record it as a barrier between the self-made man and many forms of enjoyment which

otherwise would be open to him. It is sufficient for this if it merely imparts to his manner something repelling or not distinctly inviting; the recognition of this element in his personality operates to keep off many who, but for it, would be his natural allies and his cherished companions.

These limitations of self-culture are innate in the process, and can hardly be avoided even by the most fortunate. The most feasible way of overcoming them is first to recognize them, then to systematically set about rectifying them, or cultivating their opposing excellencies. The habit of companionship, which early privations have omitted to form, must be cultivated. In beginning this, the self-made man has another burden to remove. It is his modesty. Modesty is sometimes the other side of self-conceit. While the self-made man is generally full of confidence in his own powers, he has had too much reason to know that the public at large is not equally convinced of his ability, and he shrewdly suspects that somewhere in his armor there is an unprotected spot, which his educated opponent will discover upon inspection. This half-fear of being weighed in the orthodox scales, and found wanting, is the secret cause of much of the reserve of self-made men, a reserve so common as hardly ever to be wanting but with the other class of ignorant self-made men, who are conceited and totally unaware of any possibility of shortcoming on their part. Then, too, when the self-made man comes in contact with other men of his years and general habits of mind, educated in the best methods, he often finds in them personal limitations as unsatisfactory as his own. They have, too often, a small and technical orthodoxy which is unwilling to examine any principle from the foundation, and which looks on with horror when a generally received principle is called in question. They belong to the same class as the well-meaning curates, of whom the Professor at the Breakfast Table said that they were afraid to allow truth to take an airing unless a gentleman in black cloth occupied a seat beside the coachman. The self-made man believes in truth. He has found her in so many resorts commonly regarded as questionable, that he has come to put her upon the same footing as young lady reporters of city newspapers—able to take care of herself in any locality. In fact, it is quite true that the really independent self-made man shocks the merely well-educated one quite as seriously as the latter's smallnesses exasperate him. It is a case where both sides must make allowances. Since art is the common goal of both, surely it must be that they could find some basis of agreement and companionship if once they could get over their fear of each other. This they do in time through the natural result of attrition, the corners of both wearing away in due proportion. It would have been better if they could have come to an

understanding sooner, for then the self-made man might have come into possession of a part of the educated man's traditions and environment of the past ; and, to the same extent, the self-educated man might have learned a little from the other's independence and his fearless confidence in the ultimate prevalence of truth.

When it comes to the actual work of teaching others, the account between these two kinds of musicians is more nearly equal. The self-made man here, also, has his limitations, and is apt to leave out certain things which the schools regard as essential ; on the other hand, the natural powers of his mind, strengthened by the industry indispensable for obtaining an education in this way, render him an inspiring teacher, affording his pupils plenty of courage and the stimulating contact with a living mind. This element is not so much regarded in education as it deserves to be. There is nothing so useful to a growing mind as contact with another that is fresh, original and vigorous. There is nothing so deadening as contact with a merely martinet mind, not having hold of any truth or principle for itself.

The general conclusion suggested by the various considerations herein recited is, that the student obliged to depend upon his own resources for the development of his best powers need not despair of being able to reach in time a degree of usefulness, and possibly of honor, as great as he would have been able to reach had his fortunes contained all the opportunities that civilization has placed within the reach of the most favored students. He will be a little later in reaching the goal, and the way along which he will be obliged to pass will be more arduous, and it may be that upon his arrival he will find his garments somewhat more travel-stained than those of a few of his more favored companions. Nevertheless, his mode of preparation will also have compensated him, to some extent, in the more severe mental discipline and the independence peculiar to self-education. These qualities it will be his privilege to add to his equipment of usefulness, and, if intelligently directed, they will serve him well in forwarding the cause of musical culture in general, and of facilitating to younger students the attainments he himself has made with so much difficulty ; he ought, also, to aim at improving the quality of them, for in this progress every generation starts a little further up the sides of Parnassus than the generation preceding. Culture is a slow growth at best. It comes little by little ; and the culture of mankind, as a whole, is like the islands built up by the coral insects—in great part composed of the actual substance of the generations past. Each one of us is permitted to add his mite.

CHAPTER ELEVEN.

THE GREEK DRAMA AND MODERN OPERA.

The references to the Greek drama, which are so often made in connection with discussions upon the modern opera, are not inappropriate. For, besides the fact that in Greece the drama received its first important development of which we have any knowledge, there is the still more significant circumstance that in several particulars this form of art was of the same essential nature as our opera, resting upon the same ideals. All the fine arts developed in Greece together. Poetry and music were so much a single art that the same word, "Music," included them both, along with many other branches of accomplishment which we know under the general name of "humanities"—or, in general, *culture*. From the time of the Homeric Rhapsodists, perhaps from about 1000 B. C., the cantillating tone, or the musical voice, was the invariable form of utterance employed in all formal speech calculated to influence large audiences. Indeed, there is reason to think that poetry and music had their origin together in the Aryan times, when the head of the family led the devotions of his household at the morning and evening sacrifices. All clasping hands and encircling the family altar, they made four steps toward the right, as they repeated eight syllables of the morning hymn, and four steps to the left as they repeated the next eight syllables, and so on alternately until the whole ritual was completed. It was in this manner that the ancient hymns of the Vedas appear to have been used. The cadence, the ceremonial nature of the proceeding, and the convenience of simultaneous utterance, all combined to lead this exercise more and more into the form of poetry, singing, and the dance. Out of some such simple beginning as this has arisen all our poetry, music, dance, and ritual, and all the fine arts. They had their source in religion, and by religion they were ennobled in their beginnings as they have been throughout the earlier steps in their development.

When Homer sang his legends of the fall of Troy and the adventures of Ulysses, the arts of poetry and music had materially advanced from these small beginnings, and had acquired a measure of the desire to please, and in this desire the germs of fitness for domestic uses, and for

embellishing social intercourse, and eventually with a motive for a more ardent search after the principles of the beautiful, the pleasing, the graceful and the strange. Minstrelsy, in the days of the Homeric singers, was almost the only form of literary education which existed. Neophytes were received into the school of the Homeridæ, on the Island of Chios, and taught the lines of the Homeric poems, as well as perhaps those of Hesiod, and possibly others. With the words, they were taught the vocal forms calculated to render them impressive. We are not to suppose that these minstrels had tunes, in the sense that we now use the term ; they had, most likely, certain cadences, which they introduced at the important or impressive moments of the song ; but the greater part of the discourse was in a sort of chanting. This inference is justified by several circumstances. The instruments of these singers were lyres of only four tones compass. It is quite certain that so long as the lyres had only four strings, it was because this number afforded the singers all the tones they needed. We can hardly imagine the effect of a recitation of a thousand lines, more or less, carried through to a musical accompaniment, all within the compass of four tones. Yet, so simple were the tastes, and so undeveloped the finer faculties of the sense of hearing, that this compass of musical instruments (and we cannot doubt of musical execution also) continued the standard for several centuries. The musical notation of those days, after there was a musical notation (for at first, and for several centuries, these songs were handed down orally, without being committed to writing), was incapable of indicating more than the general outline of the musical forms intended to occupy the singer. There was no notation of time, so far as we are aware, until about the twelfth century of our era. Hence, the interest of the Homeric Rhapsodies must have resided mainly in the words ; the musical form of utterance served merely to emphasize the elevated character of the performance, and to ally it to religion and the higher exercises of mind. But of music, in our sense of the word, these minstrels had only the merest rudiments.

The next step which the combined art of music and poetry took in the direction of the drama, was that of lyric song, under the leading of Terpander, about 750 b. c. This eminent musician not only excelled in his own person as a composer of Kitharodie, that is to say of songs to the accompaniment of the cithara, but he also laid down the principles of form which such a production should observe. He declared that it should consist of an introduction, principal subject, an elaboration, a repetition of the subject, and a conclusion ; in short, the general form which still remains the pattern of the sonata, as well as of every consistent literary composition. Terpander was also a reformer in music, for

he is credited with having added three strings to the lyre, thereby giving it the compass of an octave, omitting one note. This compass remained the standard in Greece all the remainder of her existence, down to the close of the flowering time of the Greek poetry and drama, three centuries later. It is not probable that Terpander made these additions to the lyre of his own original invention ; he found the lyre of seven strings in use in Asia, and in the Asiatic parts of Greece, and he carried it thence into Hellas proper. But Terpander was also a poet of decided gifts, as well as a capable minstrel. The evidence of this is seen in his having been employed to come to Sparta to sing patriotic songs, in order to influence the Spartans toward a political measure in which all Hellas was interested, but from which the Spartans were inclined to hold aloof, by reason of provincial selfishness. His mission was successful, and in that success was found a new lease of life for the art he so worthily represented.

These high personal qualities, and this lofty ideal of the mission of art, continued to distinguish the poets of Greece for generations. Among them we find the names of Sappho, that gifted woman, a sort of Elizabeth Barrett Browning of her age, she who established a school for the young ladies of Greece, and introduced woman to the art in which later she was so greatly to distinguish herself. Anacreon represented the lighter side of life. Pindar was one who represented the noble and the patriotic side of Greek life. Greek history is full of anecdotes going to show the important place which music came to occupy under the leading of such men as these. For example, we are told of Solon, who, grieving at Athens' loss of the beautiful island of Salamis, meditated upon it long, and at length having matured an ode upon it, he took occasion to deliver it in an assembly of the Athenians, with so much effect that an expedition was organized, with himself at the head of it, which recovered the beautiful island to the dominion of Athens. Some time before this there was Pythagoras, about 600 B. C., who not only led the way to acoustical investigations into the nature of music and the actual nature of musical relations, but still more by his mystical teachings conduced to increase the reverence in which the art of music was held among his countrymen. He regarded it as a part of the general order of things. The stars and the planets, in their heavenly courses, he taught, forever intone celestial harmonies, which, although too fine for our ruder ear, to celestial hearing are of ineffable beauty. Music, he taught his disciples, had the office of attuning the spirit, and of giving it repose, and sympathy with the gods. Hence he made it a rule for his followers that they should not retire to rest at night without having devoted some time to meditation and to singing hymns. Of such character it is thought were

what we know as the Orphic hymns, of which the following few lines have come down to us :—

“ Thou ruler of the sea, the sky, the vast abyss,
Who shatterest the heavens with thy thunder peals,
Before whom spirits fall in awe, and gods do tremble,
Thou to whom fates belong, so wise, so unrelenting Thou,
Draw near, this hour, and shine in us !”

In all this we see a distinct growth for the art of music. The compass of tonal combinations had increased, and by the laws of permutation the available number of combinations had increased greatly through the use of seven tones instead of four. Along with the increased complexity of music, the teaching of Pythagoras had conduced to give it greater sacredness, and had brought it into the limits of private life. But the next advance was, if possible, still more significant. It was that of the introduction of Choral Song, or the art of Chorodie. This form of art had an early origin, no doubt in the happy thought of some of the Homeric revellers to join in the refrain of a strain which particularly moved them. As early as 750 B. C., a room was provided, on the market-place in Sparta, for the rehearsal of the chorus, and at the great festivals there were not only contests of solo minstrels and lyric poets, but also of choruses from different towns in Greece. Nor was the practice of Chorodie of a merely dilettante order. It also was made to conduce to patriotism and religion. In process of time, the two arts of lyric song and chorodie were united, if indeed this had not always been the case. In the Dyonisian festivals, the leader of the procession sang his legends of the adventures of the god, while others imitated the deed recounted ; the chorus came in at the proper times with their refrains, and the whole procession cadenced its step to the movement of the rhythm. When they gathered around the altar of the god, there were new ceremonies, and new developments of all three of the elements of the complex art of music.

From this kind of festival and these semi-dramatic representations, the step was a short one to placing the principal speaker upon a higher platform, in view of all, where his narratives and illustrative actions could be better enjoyed. From this, again, it was but a short step to allowing the principal speaker to change his costume, or at least to make a symbolical change in it, to the extent of putting on a new head-dress or some other easily recognizable article of apparel, according to his changes of part. This innovation is credited to Thespis, about 500 B. C., who, in

consequence of it, is generally regarded as the patron saint in the dramatic calendar.

Thus we come at last to the first dramatic representation in due form, under the guidance of the great tragic author, Æschylus, who made his debut with one of his great plays about 500 B. C. Æschylus put two speakers upon the stage in full view of the audience, while the chorus occupied the central part of the house, now appropriated to the parquet. In the center of this empty place was the altar to the god of wine, Dyonisius, where in the earlier times a smoking victim had been offered, while the chorus intoned the sacred hymn around it in the mystic cadence of the dance. Upon this altar, in still later times, was seated the leader of the orchestra.

The art-work thus produced had many of the qualities of our modern opera. In the first place, everything in it was sung, or, more properly, intoned. The chorus occupied a place altogether unlike anything that we can picture to ourselves from the drama as we see it to-day. Instead of coming in with now and then a response, or of combining in an ensemble, as is the case in our modern opera, the chorus of the Greek tragedy represents the people, the public voice, and moral reflections upon the general course of things. Perhaps it would be near the truth to say that it represents the "common sense" of the times. Thus, in Mr. Morley's edition of the plays of Sophocles [Universal Library], in "Ajax," the chorus concludes the first act with a long series of stanzas, eight in all, which have a ring almost platitudinous. In this drama of the Greeks there was nothing like our *ensembles*, or general union of solo artists and choruses in concerted pieces. It was turn and turn about with the actor and chorus, the latter for the most part filling in the intervals during which the leading actors were changing their costume preparatory to entering in another character. Although there might be no more than three actors upon the scene, it was not unusual to have ten or twelve speaking characters represented. The stage had no movable scenery, but there were draperies and other properties of a symbolic character, which were changed with each act or when the scene changed. The stage was shallow from front to rear, but extended entirely across the house. In the rear were three doors. When the actor entered at the door in the center, he represented a prince at home; when at the door upon the right, he represented a common person; when at the opposite entrance, he came as a stranger from a distance. These distinctions, while belonging to the rudimentary condition of dramatic illusion, were nevertheless not without their convenience when the houses were so large that persons in the rear must have been entirely unable to distinguish faces.

The theatre in Athens is credited with a seating capacity of 30,000. Allowing liberally for the well-known propensity of managers to exaggerate the capacity of halls and theatres, this indicates that the place had a seating capacity unknown to our modern structures, even the largest of those erected especially for festival purposes. In order to compensate for the difficulty of rendering a speaker intelligible at so great distance from the hearers, the actors were provided with very high shoes to increase their apparent stature, and with masks which, besides improving, their faces in point of form and magnitude of feature, were also contrived to increase the volume of their voices, somewhat as speaking trumpets now do. In such vast spaces the use of a singing tone was a necessity, because no other kind of tone could have been made audible at the distance. Yet we may be sure that the Athenian actors delivered their words clearly, although in the singing tone; for it is said that the utterance of a false quantity would bring down the house in a paroxysm of ridicule. Moreover, we are told that when the play did not please them, the audiences of those days guyed the actors and the author as assiduously and as freely as a houseful of undergraduates nowadays.

The Greek author not only composed the words of his plays, but also provided the music, and what they called the "Orchestik," that is to say, the apparatus of gesture, pose, and mimicry, through which it was to be made effective. Our knowledge of the latter element, of which they made so much, is practically nothing at all, for it is impossible to make out anything definite of the fragmentary accounts of it that have come down to us. The tonal contents of their dramas cannot have been at all like what we now know as music. The small compass of the lyres, the short tone of them, for they were plucked by the finger, just as we now play *pizzacato* upon the violin or guitar, and the absence of harmony or any consonances or combinations of tones, excepting octaves and unisons, left their music barren of tonal effects beyond anything which we can realize as having in it the elements of an enjoyable art. But concerning this, we are to remember that to the Greek, accustomed to nothing more elaborate, and with his ears uneducated to our sensuous combinations of tones, it had all the refinement and beauty that he was prepared to appreciate. And however meagre it may have been, when considered merely as tone-combination, it served to illustrate the conceptions of those great minds of antiquity, Æschylus, Sophocles, and Euripides. At all events it was essentially *opera*, in which the delivery of text was always in musical tones, according to pre-established formulas, that is, according to the notes of the music as set down by the composer. It was

a combination of word, song and dance, both in its mere mimicry and in its more elevated and symbolic aspects.

In this connection it may not be amiss to recall the circumstance, perhaps unknown to readers in general, that in India there was a development of the drama about the same time as that of Athens, or a little later, having in it still more of the manner of Italian opera as known in all countries outside of Italy. The drama of the writers of "Sakuntula," and the "Hero and the Nymph," produced their plays in a language unknown to their hearers, or rather not the tongue of ordinary speech, and delivered them to the accompaniment of music. They had the curious peculiarity of beginning a play in one dialect and continuing in this so long as the spoken dialogue was kept up; later, when the dramatic interest seemed to require it, the dramatist changed the dialect and, as Mr. Silas Wegg expressed it, "relapsed into poetry;" that is to say, adopted singing and continued in this operatic way for one or more acts, and occasionally to the close. In one of the Hindu plays which extends to ten acts, four of them were sung.

All these were in the Pakrit, a musical dialect of the Sanskrit, peculiarly convenient for verse, but not at that time the spoken tongue of the people who heard the drama. The spoken parts of the play were in a dialect more nearly approaching that of daily speech. This is parallel with the custom in some parts of Europe of hearing plays in French or other tongues foreign to the country.

The Greek drama continued to possess something of the symbolic character from its origin, and it was intended to subserve the ends of patriotism and the nobler cultivation of the hearers, and not simply for amusement. No doubt it ran more and more into the latter use, especially as there grew up a rivalry among the wealthy men of Athens in the matter of mounting and costuming the plays, in which duty they took turns, according to an assignment by lot. As Athens was very rich in those days, and at the height of her commerce, great stories are told of the sums expended in this way, and glowing accounts of the splendor of the display have come down to us. According to some writers, the expenditures for mounting a new play were as great as for mounting a new opera nowadays. After Æschylus and Sophocles, both of whom conducted the drama in the same spirit, Euripides made certain improvements in a modern direction, especially increasing the number of interlocutors upon the stage to three; Aristophanes employed the drama as a vehicle for satire, and for the promulgation of patriotic opinions. From this point there does not appear to have been further improvement,

most likely, indeed, there was a decline. The flowering time of Athens was past. Activity of mind went into other channels. There was a separation between the spoken word and the tonal expression. Greek thought and Greek spoken discourse immeasurably ennobled themselves; but the art of music sank into a lower position, or perhaps, more accurately, failed to advance with them. The tonal resources of Greek musical instruments were not sufficient to educate sense-perception to the point where a new art of music could be created, answering to the perfection of the newly conceived discourse of Plato, Aristotle, Demosthenes, and the philosophers.

Considering the poverty of the Greek music upon its tonal side merely as *music*, nothing is more singular than the influence it has continued to exercise upon modern thought. At intervals it comes back again in waves, each time to lead the modern art up to a higher plane than it had occupied before, the lowest of which, tonally considered, was far higher than the highest of the ancients. The miracle plays in the middle ages did not depend upon a revival of Greek art. They must be taken as a rediscovery or a recreation of dramatic illusion imperfectly carried out. It was only at the Renaissance that the Greek drama became operative again upon modern thought. When the works of the ancient Greeks and Romans had been discovered again, after Italy had begun to emerge from the darkness of the middle ages, and the Crusades had awakened the European mind from its long torpor, the peculiarly literary works were the first to attract attention, Aristotle leading the van. It was only after a considerable advance had been made in studying the operation of this master mind, and of the science and art which flourished in his times, that attention began to concentrate itself upon the drama of Æschylus and Sophocles. This led immediately to the invention of a new art-form, Italian Opera. The attempt of the inventor, Jacob Peri, was to recreate the Greek art of musical declamation. Music appeared to them the one art of the ancient world remaining to be mastered. From this small beginning a great crowd of operatic composers arose, and Italian opera blossomed out with wonderful luxuriance. Again in the next century, the Chevalier Gluck cited the Greek canons of criticism, and again attempted to restore the ancient austerity and purity. Yet a third attempt to do the same thing has been made within our own days, Richard Wagner basing his own reforms upon the same venerable sources of inspiration. In earlier parts of the present work the question is considered as to the extent and far-reaching nature of the innovations introduced by him. Upon the whole, the especial glory of the Greek mind

must be recognized in its having been able to set in operation art-principles so productive, and to do this at a time when to our modern eyes there would seem to have been so little in the immediate environment to awaken conceptions of art so immeasurably in advance of apparent possibilities of realization.

NOTE.—The foregoing brief sketch of Greek drama is added to the present volume as a help to a better comprehension of the ideal of Richard Wagner. In the succeeding volume the subject will be treated with much greater fullness. Meanwhile, the curious reader will find much interesting matter upon the same subject in the three volumes of Rowbotham's "History of Music;" although it will be prudent for him to make important deductions from the credit therein given Greek music upon the tonal side.

CHAPTER TWELFTH.

A BIRD'S-EYE VIEW OF MUSICAL HISTORY.

Whenever the history of music shall be properly written it will be found one of the most interesting and instructive contributions ever made to the literature of physical and psychical development. No other art combines material in so manifold varieties of ways for the expression of psychic moods, or has within itself so many possibilities yet unexplored. It is, of course, open to the pessimist to suppose that in the same manner as painting developed suddenly, and came to a flowering never since surpassed, in the production of such masters as Leonardo, Raphael, and Michael Angelo, so music may be regarded as having suddenly come to its maturity in the person of Beethoven, and the masters immediately succeeding him, who, like the great painters, and like Shakespeare in literature, are destined to remain forever unapproachable. Should this eventually prove true, it would in no way diminish the preëminent interest of the progressive steps through which this art has passed, from the morning of the human race to its present noonday of intelligence. The prospect, however, is that music must still further progress as rapidly as it ever has, since it so fully and so naturally expresses psychic moods, the number and amplitude of which are continually upon the increase ; moreover, the material available for doing this is by no means exhausted, nor have our methods of employing it reached perfection. There is room for an art of music, therefore, immeasurably finer than anything that has yet been produced. Such an art must come whenever the spirit of man, in its progress toward perfection, shall have reached higher planes ; and when the barbarisms of musical temperament shall have given place to rational methods of combining tones. Given a highly evolved spirit, in harmony with the celestial powers of righteousness, open to the inflowing of light and wisdom from the Great Source, full of serene and brotherly kindness and an elevated optimism, coexistent with brilliant musical phantasy, the production of sustained lyric movements of matchless beauty would be a foregone conclusion. True, it is possible that in the same way as the arts of sculpture, painting, and music have been developed successively as the most available expression of the spirit in three

stages of its progress, so a new method of combining material might possibly be invented, more suitable than music for expressing these novel and elevated psychic experiences. Of such an invention, however, as yet there is no promise. Music is predominantly psychic in its nature, and apparently contains within itself possibilities of vastly more perfect and diversified phases of expression than have yet been realized within it.

There are two phases of this story which address themselves to materialistic and spiritualistic philosophers with almost equal force. Upon the one side we see the earlier experiments made within limits so narrow as plainly to point to an undeveloped state of the discriminative powers of the sense of hearing. This is fairly inferable from the limited range of the early instruments of music, which rarely exceeded four tones, even when civilization had already made considerable attainments. It is seen, also, in the long period during which tonal combinations were very few, and the still longer ones antedating the discovery and practice of chordal combinations. Upon the other side, perhaps, as an incident of the use of musical utterances as a part of religious liturgies, we find the art, very early in its history, surrounded with sentiments of veneration and mystic impression of its superiority, to which all subsequent experiments in enlarging its powers have been much indebted, and which, in fact, still remains the basis of all our philosophy and æsthetics of Music. How are we to explain the conception of such an elevated idea of the beauty and significance of an art of music by peoples having so little in their environment to suggest it through the direct operation of sense-perception? Both phases, the sentimental and the practical application of the art of employing tonal combinations for psychic expression, have moved on simultaneously. Whatever indebtedness the spirit may have been under to the ear for each step of the progress, it still remains incontestable that from the times of the Aryan cantillators of the oldest hymns of the Rig-Veda to the latest of German mystics, philosophy has uniformly been in advance of the material phenomena supposed to have inspired it.

The history of Music naturally divides into two great periods. The first ends with the development of a monophonic art of music among the Greeks and Hindus, highly elaborated upon the sentimental side, culminating about three centuries before the Christian era. In its intention this form of art had in it the substance of our present art of music, but tonally considered it was extremely poor, as we are sure from the compass and powers of the instruments employed. This development of ancient opera* was itself the flowering time of a long period of seeding

* See chapter on the Greek Drama.

and cultivation, whose beginnings must be sought in the remote past, far beyond the existence of tangible records. Three circumstances give hints of the length of this period of development: The Rig-Veda, the oldest literary monument of the race, consists of hymns of inconceivable antiquity, arranged for morning and evening worship, in which the metre and the sentiment imply a musical form of utterance. The tombs of the fourth Egyptian dynasty, dating from something like 4000 B. C., contain representations of harps, lyres, lutes, flutes, trumpets, and drums, constructed according to the primitive type of those in use in the present day. They also show players, singers, dancers, and ceremonial processions in which music was a part. This point, so far from being the beginning of our modern art of music, must itself have been preceded by some thousands of years, during which these different types of instruments and their uses were in process of development. In the tomb of Rameses IV, who lived about the time of the fall of Troy, or a little earlier, there were harps represented as tall as a man, although they may have been reserved for the uses of the higher members of the priestly class. These harps had from seventeen to nineteen strings. So in India, we find in the Sanskrit, but of antiquity unknown, three words signifying a musical bow, according to the material of which it was constructed. The art of inciting vibrations upon a musical instrument by means of the bow was a discovery of this branch of the Aryan races. All our viols owe their powers to these ancient Aryan experimenters.

The progressive enlargement of the compass of instruments points to a gradual improvement in the sense of hearing, and a progressive increase in the pleasure derivable from its exercise. This branch of the progress has been touched upon in a preceding chapter, upon the psychology of music.

According to all trustworthy indications, the ancients never employed two different tones together, intentionally, except as octaves, or as components of a mere aggregation of unrelated pitches, sounding together as an undifferentiated mass of noise. All their music was one-voiced, and they were wholly ignorant of the harmony of simultaneous sounds.

The second great period in musical development embraces all that part from the Christian era until now. In the earlier, or apprentice periods of it, experiments were in progress concerning the employment of two or more sounds together, according to what we now call harmony. It is likely that this step in the progress was due to the Northern Scalds and Minstrels, whose instrument was the harp. Upon this subject there is interesting material in Fetis' great "*Histoire Générale de la Musique*," left unfinished by the erudite author in 1871, after forty years' collecting

and digesting his material. The five volumes completed and published bring the investigation down to the fifteenth century. Although too much time is spent in telling what we do not know and cannot know, the book is a splendid monument, and a convenient repository, of that which we *do* know concerning the progress of this art from its feeble beginnings.

The simplicity of ancient music is still further confirmed by the circumstance that their notation was inadequate to the exact representations of nearly all the relations of tones now entering into our music. The time table was not discovered, nor was there measured music, so far as we know, until the twelfth century. The neumes, constituting the notation until Guido introduced the staff, indicated mere "intonations" or slides of the voice. They had nothing exact in their meaning. Tonality appears to have become established in England by the eleventh century, and upon the continent a little later. From that time dates all our rational development of music. The theory of music began to be investigated scientifically by Tartini, Rameau, and others, contemporaneously with Bach, but rational usage had been reached a century earlier or more, through the empirical experiments of the composers and players.

The second part of this period, therefore, must be taken from the dates of Bach and Haendel, roughly from the year 1700, as that when the material of music had been so far mastered, both as to its technical handling and as to its employment for the expression of feeling, as to permit the creation of master works of lasting value. It is entirely true that before the time of Bach there was creditable music created, within certain limits. In Bohme's "Tanzes in Deutschland" there are a number of examples of this kind, especially certain ones by Michael Praetorius, the musical giant who left us those monuments of the musical state of Germany in his time, the *Syntagma Musica* and *Terpsichore*. There are also other examples in the same connection, notably some of those in Melchor Frank's *Floresmus*, published at Nuremberg in 1610. The Galliard, No. 185 in Bohme, is a particularly fortunate specimen. It might have been written as a modern antique, in our own day.

These together show that the art of using harmonic successions in a simple and direct manner had been mastered at an earlier period than we usually credit. If the question be asked why it was that no master works were produced by composers able to write thus simply and intelligibly, the answer must be that the time was not yet ripe for it. Musical sentiment and feeling were not yet developed, and the fashion of the day was in the direction of contrapuntal elaborations, the due enjoyment of which was inconsistent with the simple reception of musical discourse by the

musical intuitions, and through them by the feelings. Nevertheless, the discovery of so well written pieces of music as these, so long before the time commonly taken as the beginning of modern music proper, is an interesting fact. It shows that after the discovery of certain musical relations as permissible, a certain time of experimenting has to elapse before they can be established as desirable, and yet again another period before their relation to the feelings is comprehended. Since the end of art is that of touching the feelings through the mediation of sensuous material, it follows that no such combinations are available in their higher uses until their inner implications have been comprehended, at least by the composers proposing to employ them. In fact, it is from the proper use of musical combination, by deeply intuitive composers, that the public has to learn their inner meanings. Between the time of Praetorius and that of Bach there was a century, during which counterpoint had to be exhausted of its novelty and of its independent interest, apart from feeling signified by it, and these new combinations of Praetorius and the others had to become familiar, before the time was ripe for a Bach and Haendel to employ the resources of music as the direct servants of their phantasy and feeling. Being masters, both of them, upon the technical side as well as in the depth and range of their imaginations, they were the first to leave for us master works, bold and lasting. In further token of the mastery of musical material general in Bach's time, and the understanding of it among hearers, as a form of discourse intelligible and enjoyable, we are to remember the activity of Scarlatti in Italy, who wrote about a hundred operas; and of Rameau in France, who not only wrote much successful music, but made an attempt to set the doctrines of Harmony in rational order.

After Bach the principal steps of musical progress have been first toward the development of simple and symmetrical mélody under Mozart, Schubert, and the Italian writers. Second, the deepening of music and ennobling it, by Beethoven, who, as compared with Mozart, probably limited the vocabulary of melodic and harmonic forms, but employed those that he did use with such inner regard for their meaning as to produce the effect of having created a new art. This work of deepening music and of enlarging its vocabulary, especially upon the harmonic side and in coloration, was carried on after Beethoven by Schumann, Berlioz, and Wagner. Meyerbeer, who is often reckoned among great composers, must be regarded mainly as an artist in effects. Weber is another who represents a special province or a passing phase in the development of music. At the present moment we are in the dead period following the work of geniuses of predominant ability. It will take some

time for the personal influence of Richard Wagner to die out, and for a new genius to arise able to employ his additions to the musical vocabulary more in accordance with the traditions of the classical school than Wagner did.

There is, in fact, a fundamental question to be decided : Ever since Beethoven the development of music has been in the direction of a freer expression of feeling, a wider diversification of it, and less and less regard to its beauty, or to the production of a symmetrical and well-sounding art-work. In some of these modern compositions the moments of dissonance outnumber those of consonance by far. Symmetry is not at all regarded, or but slightly so. Feeling is made the measure of success. Still later composers run riot in all sorts of bizarre combinations. The art of Bach, Mozart, Haydn, and Beethoven, not to say of Mendelssohn and Chopin, was an art of symmetry, of predominant consonance, and of melody. The question to be decided, therefore, is whether the true end of music is to represent feeling as such, or only such phases of feeling as belong to the beautiful, or eventuate in the beautiful. It would be presumptuous to attempt to decide this question here. Only those gifted with deep sensibility for music and with a spirit of artistic divination have a right to vote upon it. Artists alone can decide upon the province of art. Nevertheless, in the long run, the question will have to be determined according to the principle of "the greatest good to the greatest number." If the new way of writing affords a greater aggregate satisfaction than a modification of it in the direction of the art of Mozart and Beethoven promises to do, it will prevail.

INDEX.

AESCHYLUS, 195.
 Ambiguities concealed by temperament, 142.
 Ancient music, simplicity of, 192, 203.
 Aphorism for piano teachers, 124.
 Archytas, 156.
 Aristotle, 131.

BACH, and counterpoint, 25.
 and feeling, 109.
 and piano music, 109.
 and temperament, 147.
 principles of unity, 26.
 related to modern music, 203.
 Beethoven's repose, 27.
 Wagner on, 22.
 Berlioz, biographical, 10.
 and Romanticism, 11.
 plan of festival work, 15.
 Bohme's Tänze in Deutschland, 203.
 Brain, structure of, 88.

CADY, Prof., list of studies, 119.
 Carreño, Mme., list of studies, 115.
 Celtic minstrels, 132.
 Chinese scale determinations, 125, 130.
 Choral song of the Greeks, 194.
 Cognition of music, 89.
 Comma, Prof. Ellis' notation of, 130, 154.
 Contents of key, 140, 142.
 Coordinations of musical impressions, 134.
 Criteria of technical exercises, 114.
 Culture and environment, 174.
 Culture defined, 173.
 Curwen, Rev. John, 160, 163.

DAMNATION of Faust, 17.
 Development of technic, 109.
 Didymus, 156.
 Differential touch, 111.
 Dissonance of old organs, 147.
 and consonance contrasted, 148.

EAR training, 162, 166.
 Education of the eye, 179.
 Egypt, music in, 202.
 Ellis, Prof., notation of commas, 130.
 Eratosthenes, tetrachords, 156.
 Etude defined, 112.
 Euclid, 127.
 section of canon, 129.
 Euler, 141.

FARABI, Al., 130.
 Feeling and art, 204, 205.
 Fillmore's course of studies, 113.
 Flying Dutchman, 37.
 Four-hand study recommended, 9.
 Frank, Melchor's Floresmus, 203.

GALLILEI, 129.
 General view of musical progress, 150.
 Gleason's list of studies, 119.
 analysis of Tristan and Isolde, 41.
 Gotterdämerung at Munich, 76.
 Graded course of practice, 122.
 Greek drama and modern opera, 191.
 divisions of tetrachords, 150.
 transposition system, 145.

HARMONIC classifications in Sol-fa, 167.
 partial tones, 95, 137.
 Harmony, perception of, 92.
 origin of, 132, 202.
 Wagner's originality in, 29.
 Harp, as educator to chord perceptions, 134.
 History of music, bird's eye view, 200.
 Fétis', 202.
 Homeric minstrels, 192.

IDEAL, Wagner's, 21.
 Identity, elements of, in related tones, 96, 136.
 Imagination and sense perception as co-factors, 201.
 Impression of tonality, 94.
 India, musical drama in, 197.
 Influence of Greek ideal, 198.
 Intervals, ratios and logarithms of, 157.
 Italian opera, Wagner on, 21.

JUST and tempered intervals, 155.

KEY, perceived as whole, 91.
 contents of, 140, 142.

LANG, E. J., list of studies, 121.
 Leading motives, general idea, 31.
 Meistersinger, 44.
 of Nieblung Ring, 56.
 Tristan, 41.
 Wagner's theory, 53.
 Liebling's list of studies, 120.
 Limits of progress, 200.
 Liszt, 82, 111.
 Logarithms of intervals, 157.
 Lohengrin, 39.

MAJOR and minor, how related, 142.
 Mason, Lowell, 194.
 William, list of studies, 117.
 Technics, 113.
 Material for self-culture, 181.
 Meistersinger, 44.
 Melody, Wagner upon, 30.
 Mental effects of key, 91.
 Methods of self-culture, 175.
 Monotony of Wagner, 33.
 Mozart and cantabile, 109.
 Music and feeling, 103, 204, 205.
 preeminently psychic, 200.
 Musical composition, psychology of, 102.
 fantasy, degrees of, 97, 100.
 how developed, 108.
 history, bird's eye view, 200.
 progress, sources, 201.
 after Bach, 204.
 not limited, 200.

NIEBLUNG'S Ring, story of, 47.
 Nielsen-Roundsville, Mme., list of studies, 118.
 Notation, tonic sol-fa, origin, 161.
 tonic sol-fa and staff, compared, 165.

OPERATIC music, educational influence of, 183.
 Orchestrisk in Greek drama, 196.
 Orchestration, Wagner's, 31.
 Orphic hymn, 194.

- PARSIFAL at Bayreuth, 81.
 Perceptions of chords and tonality, 133, 134.
 Perfect intonation of singing, 151.
 Periods of musical history, 201, 202.
 Persistence of musical impressions, 95, 135.
 Phonations in speech, 166.
 Pieces used as studies, 123.
 Poole, H. W., enharmonic organ, 141, 151.
 Praetorius, Michael, 203.
 Problem of teaching, 107.
 Progress, methods of, 149.
 direction of, 150.
 Psychological relations of music, 88.
 Psychology of musical genius, 101.
 Ptolemy, 127, 141, 156.
 Pythagoras, 126.
- RAMEAU, 130, 161.
 Repose and clear form, Beethoven's, 27.
 Resultant tones, 130.
 Rheingold at Munich, 58.
 Rienzi, 36.
 Romantic movement in music, 28.
 and Berlioz, 11.
 element in Schubert, 5.
 Rousseau, 161.
 Rules for computing intervals, 153.
- SCALE ratios, 141.
 Scenic improvement, Wagner's, 65.
 Schools, limitations of, 172.
 and apprenticeships, 185, 187.
 Schubert, 3.
 symphony in C, analyzed, 6.
 Schumann, his pianistic importance, 110.
 Self evidencing power of music, 177.
 Siegfried, 71.
 Sight-reading tests, 167.
 Sorge, 139.
 Staff and sol-fa, 168.
- Stage and theatre at Athens, 195.
 Studies in piano-teaching, 107.
 Syntagma musica, 203.
- TANNHAÜSER, 38.
 Tartini, 139.
 Technic, its modern extension, 109.
 Temperament, 145.
 Tempered scale in China, 148.
 intervals compared with just, 155.
 Terpander, 192.
 Tetrachords as divided by the Greeks, 156.
 Thalberg and Liszt, 111.
 Thematic treatment, Wagner's, 31.
 Thinking music, habit to form, 165, 178.
 Third relations, 156.
 Tonal system, historically considered, 125.
 Tonal limitations of Greek music, 192.
 Tonic sol-fa, as educational factor, 158.
 unsuited to instruments, 169.
 Tonality, source of, 91, 93, 94.
 Tristan and Isolde, Gleason's analysis, 41.
- VALKYRIE at Munich, 65.
 leading motives of, 56, 57.
 Vedas, related to music, 202.
 Violin, acting upon sense perception, 135.
- WAGNER, and melody, 30.
 as contrapuntist, 45.
 as harmonist, 29.
 biographical, 19.
 enharmonic changes, 93.
 his first period, 34.
 his ideal, 21.
 his orchestration, 31.
 his second period, 47.
 his style, 25.
 Weber, influence on Wagner, 22.
- ZARLINO, 129.

University of California
SOUTHERN REGIONAL LIBRARY FACILITY
405 Hilgard Avenue, Los Angeles, CA 90024-1388
Return this material to the library
from which it was borrowed.

O
OCT
MAY
REC
JUN
MAY

QUARTER LOAN

JAN 23 1998

REC'D MUS LIB

FEB 03 1999

Form L9-Series 4939

THE LIBRARY
UNIVERSITY OF CALIFORNIA
LOS ANGELES

MUSIC
LIBRARY

MT

6

M43h

1888

v.2

UC SOUTHERN REGIONAL LIBRARY FACILITY



A 000 163 582 0

U

